AMERICAN

Journal of Mining,

Milling, Oil-Boring, Geology, Mineralogy, Metallurgy, etc.

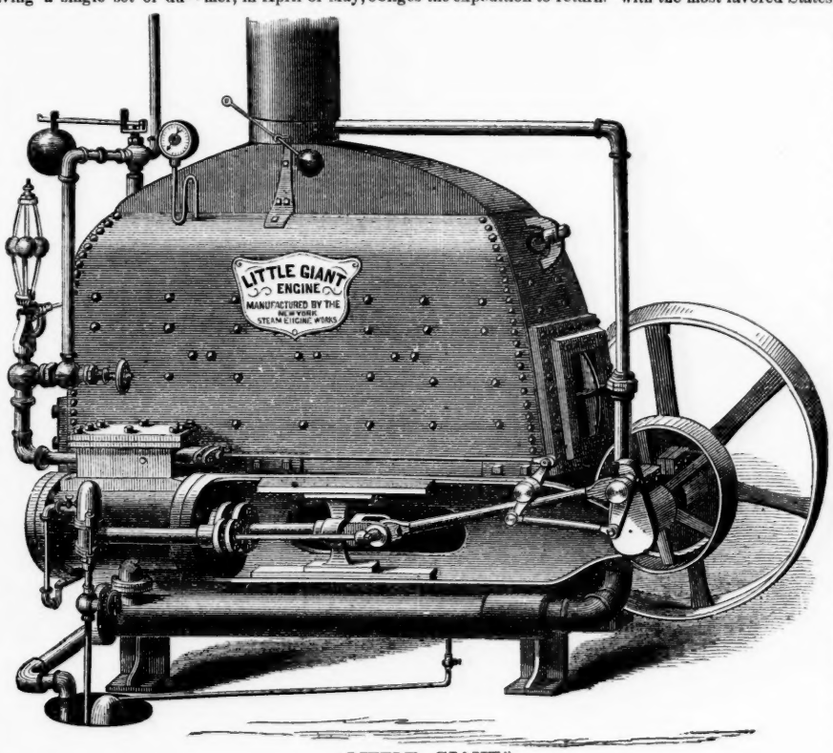
VOLUME I.
NUMBER 5.

NEW YORK, APRIL 28, 1866.

$1 A YEAR IN ADVANCE.
SINGLE COPIES TEN CENTS.

"LITTLE GIANT" ENGINE.

A steam engine combining economy, portability, and strength, is certainly a desirable agent to miners and mill-men. Among the many claiming these advantages and competing for public favor, none probably satisfy that want better than the "Little Giant." To companies using a large number of engines it will be found very desirable, because every part is made with perfect exactness, so that each part in a thousand engines can be interchanged for its corresponding part in every engine. Everyone knows the disadvantages of stopping a mine or well for even a day; and a company, by having a single set of duplicates, can run twenty engines with perfect confidence, as, in case of accident, a broken part can be instantly replaced. In the item of transportation advantage is claimed over all other engines, it being smaller, lighter, and more compact than any others of the same power. Any kind of coal, wood or gas can be used under its boiler. Its fire grate is four feet long and two feet wide, so that cord-wood can be used without any cutting, and steam can be raised in from twenty to twenty-five minutes from the time the fire is lighted. The Little Giant Engine is manufactured in this city, at the New York Steam Engine Works.



"LITTLE GIANT."

Explorations in Palestine.

Captain Wilson, chief of the first English expedition for the exploration of Palestine, has made a report to the association in London. It is dated Damascus, December 20, and is in substance as follows: The party arrived at Beyrout at the end of November, and left it for Damascus on the 10th of December. Astronomical observations have been obtained, fixing the position of Beyrout, Mejdel-Anjar, Baalbek, Surghaya, Suk Wady Barada, Damascus, Tell Salhiyeh and Harran el-Awamid. The lakes east of Damascus are in course of exploration. Plans with detailed drawings and photographs have been made of the old temple at Deir el Kalah (near Beyrout,) the temple at Mejdel-Anjar, the old city of Chaleis, a small Greek church at Masi, the basilica of Theodosius at Baalbek (in the great quadrangle abutting on the western end of the great Temple, the back of the apsis resting on the steps), he temple at Ain Fijeh, and the Roman gate at Damascus—Bab Shurky. The exploration of the Assyrian Mound at Tell Salhiyeh, near Damascus, had been commenced. A plan of the great mosque at Damascus, with photographs of details, was in course of execution. In addition to these, careful photographs of a large size had been taken of various objects of interest along the road between Beyrout and Damascus; some of these for the first time. At Tell Salhiyeh and Harren el-Awamid inscriptions had been found apparently not hitherto known. The exact route to be taken by the party south of Damascus will naturally depend somewhat on circumstances, but it is intended and hoped that it will include the following places: Banias, Kedes, Tell-Hum and Khan-Minyeh (Capernaum), Beisan, Zerin (Jezreel), Nablus and Mount Gerizim, Sebastiych (Samaria), Tibueh, Beltin, and that explorations to good purpose may be accomplished at each of these before the setting in of summer, in April or May, obliges the expedition to return.

Illustrations of West Virginia.

By Prof. Charles S. Richardson.

If it is taken into consideration the enormous amount of mineral wealth known to be stored up within an area of 12,000 square miles of this new State—the natural facilities offered for its extraction and transportation- the proximity of a ready and rapidly expanding market—the quality and highly remunerative prices it commands—and the safe medium it presents for the investment of *bona fide* capital, our readers will be somewhat astonished that the facts, which the following papers are intended to illustrate, have remained so long publicly unknown.

The bordering States of East Virginia, Pennsylvania and Ohio, have each in their time commanded the attention of capitalists and men of science, and in consequence of the liberal patronage bestowed on the latter by the governments of those States, their respective merits have been set forth and long known to the world. Hitherto, without any means of redress; shut off in a measure from a direct control over their own affairs, the people of West Virginia have long severely felt the anomalous position in which they have been placed; the late war, evil as it was in itself, did not terminate void of some beneficial results; for it severed the ligatures which, for so many years, fettered and cramped the energies of the western men, by the enthrallment exercised over them by their fellow-citizens of the east. Being now free and unincumbered, it is their intention to define their position. They wish to show to the world they are a progressive people; that they hold within their grasp all the elements of wealth, greatness and prosperity; to accelerate their amelioration, they invite the co-operation of the outside mercantile and monetary community. They are aware of the numerous advantages arising from a reciprocity of interests, and we are satisfied when such is once established, the mutual relation will place them as compeers with the most favored States of the Union.

The writer, who has devoted the past seven years almost exclusively to the development of the mineral resources of this State, and who feels a lively interest in its advancement, proposes, in a series of short weekly articles, published in the columns of the New York *Times*, and other papers, to delineate, in a concise, plain, simple and truthful manner, its most interesting and prominent features; he is aware that he cannot please everybody, and, to be candid, he is not going to try. Every "silver cloud has its dark lining," and West Virginia, bright and glittering as she may wish to appear, possesses some sable spots which the artist must paint in their true colors to produce a faithful picture. These, however, are fortunately few in number; and we hope by the gentle attrition of the author's mental caoutchouc, they may be erased without materially roughening the surface. The object sought is to give a general description of the country as we find it; and although we desire to render due courtesy to all, we cannot, and will not, advocate, flatter, puff up, depreciate or condemn any one special property, either of individuals or companies. We start on the basis of independent action, with the motto, *Pro bono publico*. Our plan is to take up the country by sections and districts, and succinctly portray its geological, mineralogical, agricultural and commercial features, giving such statistics of a reliable character, as may come within reach during our progress; and although our chief aim will be accuracy of delineation, yet we cannot expect but that some few errors will accidentally creep in; these, however, we shall rectify immediately they are discovered. The most engrossing subject of the present time is the "oil deposits." These wonderful wealth-producing reservoirs, are now being tapped at different places across the country for a distance of 100 miles, and so rich is the oil in quality, and abundant in quantity, that if the relative cost of the wells and the value of their products is taken as a standard of comparison, the mimimum rate of the former and the maximum of the latter, will far exceed anything of its kind hitherto practically developed within the United States. This, therefore, will constitute the subject-matter, of our first illustration; which will be followed by a lucid description of the cannel coal of the country. The manufacture of

cannel oil, its cost, profit, and numerous uses to which it can be economically applied. A full account of that extraordinary deposit of bituminous matter, found in the Ritchie mines, known under the various names of Grahamite—Crystalized petroleum—Ritchie mineral—and mineral resin, its analysis, constituents, value, etc.

The Bituminous and Splint Coals of Kanawha; the Iron ores, oil and cannel of the Elk, Monongahela and Big Sandy; Salt works and wells of the Canawha river; Minerals of the Pocatalico; Steam Coals, Birdseye Cannel and Pitch Coal of the Peytona and Briarport districts of Coal river, and its navigation. The Forests, quantity, quality, description, and value of its timber, with practical rules for its profitable conversion. Agricultural value of the unimproved lands; their present real price and capacity of production. Experiments in the culture of Cotton, Tobacco and Sorghum, by the writer. The tobacco lands of Calhoun and Roane counties; their immense yield, and success of the resident planters. West fork and its tributaries, Burning Springs—Land titles, bogus patents, tax-titles, and squatter's rights, suggestions for legislative enactments, through which all the existing defects of the land-titles may be remedied; some facts in relation to the immense injury done to the State by that destructive being know as the "land-shark." Advice to capitalists, companies, and agents and speculators, immigration and colonizations, its advantages, socially, morally and politically. The West Virginia Central Railroad—the great highway of the State, course, cost, and traffic returns—mines and mining; the Wirt, Ritchie and Roane Railroad, necessity of its early construction, slackwater navigation of the little Kanawha River, and other internal improvements. Cities of the great triangle, Parkersburgh, Grafton and Charleston, their growth and future importance; trade of the West; with a variety of other useful and interesting matter which will suggest itself as we proceed with our work, the whole of which we hope to complete within the present year.

What is Oxygen?

Professor Schoenbein writes, by invitation, his views on the subject to the Scientific Association of France in a lengthy communication, from which we extract the following statements: You know, says the Professor, that for the last thirty years I have been almost exclusively and uninterruptedly engaged in investigating oxygen, and that in this long series of researches I have collected, with respect to that elementary body, a considerable number of new facts, from which, I think, I can deduce the following conclusions: 1. Oxygen can exist in three different allotropic states. 2. Two of these states are active and opposed to each other; I distinguish them by the names of ozone and antozone. 3. Equal quantities of ozone and antozone neutralize each other in order to form inactive or neutral oxygen. 4. Neutral oxygen may be decomposed or transformed into equal parts of ozone and antozone. But I must add that the experimental demonstration of the correctness of these propositions is not so simple as, for example, that of the composition or decomposition of water, and in order well to understand their logical concatenation it is absolutely necessary to know a good many facts relating to them. Ozone and antozone are always mingled with a certain quantity of neutral oxygen, a consequence intimately connected with the generation of the two active modifications of oxygen.

The Hardening of Iron.

A French experimentalist found, a few years since, that by heating iron tolerably free from carbon, with a small quantity of boron, to a very high temperature, he obtained a product which could not be forged, but which possessed extraordinary hardness. He has now found that an equally hard metal may be obtained by adding to ordinary cast iron, in fusion, phosphate of iron and peroxide of manganese; he does not mention in what proportions. The product cannot be forged, but it casts easily, and is, therefore, applicable to the construction of such machines, or parts of machines, as require in their material extreme hardness rather than tenacity. The metal is, moreover, singularly sonorous, and the discoverer proposes it as a material for bells. He finds that a still harder metal is producable by the addition of tungstein—again he omits to say in what amount—to ordinary cast iron. He states that this tungstein iron surpasses everything previously known as a material for tools for cutting rocks, and that crystals of it will cut glass as readily as the diamond.

The Railroad between Constantinople and Smyrna.

A telegram from Smyrna reports that the crossing of the Ephesus pass, on the Aidin Railway, by the temporary line over the mountain (pending the completion of the tunnel) was successfully effected by a locomotive, which passed into the Aidin plain, and proceeded beyond Azizieh. As the main way had been, for some weeks, complete to the town of Aidin, through communication with Smyrna is thus practically accomplished. The tunnel is progressing rapidly, and will be open in a couple of months.

Mining Summary.

California.

Touching the odious Julian bill, the citizens of San Francisco, in mass meeting, recently adopted the following:

WHEREAS, information has reached us that a bill has been introduced in the House of Representatives of the Congress of the United States, which proposes "to divide all mineral lands into small parcels, and to sell them at public auction, and allowing actual occupants to pre-empt at valuations to be fixed by the Commissioner of the General Land Office;" and whereas, the said lands have been occupied and developed for the last eighteen years, under the view and with the knowledge and acquiescence of the Government, and have been made valuable by the labor, skill and capital of the people, which in the aggregate has been inadequately compensated, although the prosperity of the country has been greatly promoted; therefore,

Resolved, That any measure having for its object the sale of the mineral lands of the Pacific States and Territories, would be unjust, unwise and impolitic, fraught with mischief, and if carried out, disastrous in its results to the prosperity of these States and Territories.

Resolved, That while the people of this coast feel that they are unsurpassed in their devotion to the well-being and success of the great Government under which they live, it is the opinion of this meeting that the contemplated law would be difficult to enforce, and any attempt to do so would inevitably lead to alarming results most dangerous in their consequences, and which would only be averted by the continued recognition on the part of the Government of the legal principle, that the knowledge and acquiescence of the Government in the occupation of these lands amount to an irrevocable license, and have ripened into a right of property which is sacred and inviolable.

Resolved, That the only legislation which ought to be had or done by the Government of the United States in reference to the mineral lands, is a simple confirmation of the titles or ownership of the parties now possessing, or hereafter to possess, these lands, according to the laws, regulations and customs which prevail in these States and Territories. And we believe such confirmation would tend to inspire confidence among the capitalists of the Atlantic States and Europe, and thus materially advance the rapid development of our mining interests.

Resolved, That copies of these resolutions be sent to our Senators and Representatives in Congress, and that a copy be sent to the Governor of this State, with the request that he will bring the same to the notice of the Legislature of California now in session.

Alpine.—The Monitor *Gazette* of March 17th, gives the following mining intelligence: Four weeks ago we mentioned that the Buckeye No. 2 Company, in drifting on a vein they had previously run through, had found what they sought—pay ore in large quantities. We were shown some of the ruby ore at the time, and did not doubt the truth of the report. We are much gratified now to be able to state that there was no mistake about it, though the local paper made no mention of it, and the strike was kept dark for some time. Work went quietly on, and as quietly the ore dump received its daily deposit of the true ruby silver-bearing quartz, until a quantity estimated at sixty tons loomed up before the astonished eyes of the Rip Van Winkles, who gradually became aware that something was "turning up." The vein at the point now reached is six feet wide, cased in as pretty clay selvedges as heart could wish. The whole body of quartz is more or less filled with ruby ore, and it is estimated by those who would "nothing extenuate;" to work from sixty to seventy-five dollars per ton. The company have sent an agent out to interest parties having capital to either purchase the mine, or aid in putting it in shape by building mills, etc., to yield its treasures to the great channels of trade and traffic, and contribute its mite to the restoration of specie payments. The Alpine *Chronicle* of the same date says: The Christopher Columbus Company have struck water in their tunnel, which is now in about 350 feet. They expect to strike their ledge within a very short time. This claim is near this town, and is owned by a few of our German citizens. The Simpson and Bosselle claim, Woodford District, upon which no work has been done for nearly two years, is about to have work on it commenced again. No claim in Alpine county has enjoyed a better reputation than has this, and the company confidently anticipate striking paying ore by running their tunnel but a short distance further. Superintendent Wells commenced work on the George Law claim last Saturday. He has made a good trail, and built a cabin where he has commenced a tunnel, on the western side of the claim. The tunnel will strike the ledge about two hundred feet below the top of the croppings.

Sierra.—A correspondent of the Downieville *Messenger*, writing from Alleghany, March 11th, gives the following mining intelligence: Mining is rather dull at present. The Masonic Company has been taking out from one hundred and fifty to one hundred and sixty ounces per week for some time, until last week. They had something of a cave, which was not much of a drawback, I believe. I have not heard that they cleaned up since. Gov. Newell has returned and commenced operations with two men. We were expecting him to work fifty or sixty, as his machinery for a new mill was on the ground, and lumber and such things needed. It is reported that the Sierra Nevada Company has placed some impediment in his way and that he intends to move his machinery. The Union Company keep their mill constantly, and are well paid. The Oak Flat Company are diligently at work running their tunnel, and will put up a new mill in the spring. The Twenty-one Company are waiting for good roads to open, so they can put up a new mill. The Fac Simile tunnels are filled with water, so they cannot work to advantage for some time to come.

Butte.—The quartz ledges in the vicinity of Forbestown are proving to be immensely valuable, and the extent of that mining section is said to be as great as that of the famous Grass Valley, hitherto considered the richest and most extensive in California, or the world.

Nevada.—An exchange, having expressed doubt as to a statement made by the Nevada *Gazette*, to the effect that the Alison Ranch mine was paying $1,800 a ton, and that the weekly yield of the mine was $200,000, that paper replies that its information was derived from a reliable source. The rock that paid so largely was taken from a depth of seven hundred feet below the surface, and for a period of several weeks, the gold cleaned up each week amounted to about $200,000. These facts, taken by themselves, might give a person who knew nothing of mining an exaggerated idea of the annual yield and net profits of the Allison mine. In consequence of the great depth reached, the expense of working the mine is now very heavy; the ledge, too, is small, so that although a large number of men are employed, they are not able to keep the mill running steadily. But notwithstanding these drawbacks, it is believed that the yield of the mine is greater now than it has been at any former period, and the profits are also larger.

Placer.—The Auburn *Stars and Stripes* of March 21st gives the following account of a silver lead in its county: We were shown yesterday, by W. Hathaway, a small bar of silver taken from the Pacific lead, about a mile below Ophir, in this county. The bar was obtained from about twenty pounds of rock, which was first roasted, then pulverized in a mortar, passed through a sieve and panned out. The specimen contains considerable gold, and is worth about $4 50 per ounce. The lead was discovered a few months since by James Dennis, and is owned by Dennis, Pierson, Hathaway and others. On the top the ledge is about a foot wide, but at the depth of about thirty-five feet it is five feet eight inches in width, and promises to hold out well. Extensions have been located on both ends of it; and the Ad Valorem ledge, near by, appears to contain ore of the same character, and is pronounced, by those professing to be conversant with such matters, to be equally good. Dr. Veatch, an old Washoe explorer, has been over some of the ledges lately located in the vicinity of Ophir, and expresses a highly favorable opinion of them. . . . Dr. Blatchly, bearing a sack full of rich and curious specimens, paid us a brief visit. He had just returned from a visit to the Whitlatch Union mine, in Marshall Canyon, where he had been fortunate in procuring a rare collection of cabinet gems. Of the number were several samples of chloride ore, gorgeous in deep and delicate tints of blue, green and purple, and rich beyond measure in horn silver. There was also a mass of beautiful quartz crystals which, as shifted in the hand, emitted the most delicate opalescent rays, and will be an exquisite addition to any cabinet. The mine is being worked with systematic energy, and, according to the Doctor, one hundred tons of ore, estimated to average one hundred dollars per ton, have accumulated on the ground.

Plumas.—The Quincy *Union* of March 17th records the following mining intelligence: The Crescent Mills are running twelve stamps on rock from the Premium ledge, and are getting good returns. The owners of the Premium, W. A. Bolinger and R. C. Chambers, intend putting up a mill on the ledge this season, and will commence work upon it in a short time. Kellogg and Judkins have commenced work upon the Kittle ledge at Cherokee. They are getting out some very good quartz. Some of the assays of ore from Black Rock which we have seen show the rock to be very rich in gold as well as silver. One day this week the Crescent Mills crushed a few tons of rock from the Plumas mine, which is an extension of the Premium, and from a run of eight hours with twelve stamps, the company cleaned up $500. The ledge is owned by Howell & Co., and is considered to be one of the richest ledges in the county.

Santa Cruz.—A new mining company, says the *Sentinel*, has been incorporated in Santa Cruz. The mine this company is organized to work is situated near the San Lorenzo river, about 9 miles from Santa Cruz. The discovery of the lode has been kept secret by the discoverer for some time, in order that they might make arrangements for forming a suitable company, and securing a sufficient number of feet in the lode to warrant them in proceeding with the work. Several meetings of the company—comprising 36 shareholders—have been held, and from the interest they take in it, and the preparations being made, we should judge that they mean to thoroughly prospect the lode. Mr. Flag, the Superintendent of the San Lorenzo Gold and Silver Mining Company, has assayed a portion of the rock, and states that he is satisfied the yield is very large. The rock which he tested was taken from the surface of the lode, or out-croppings, and yields from $300 to £500 per ton.

Sonoma.—We are informed, says the Marysville *Appeal*, that gold in paying quantities has been discovered about five miles south of Cloverdale, causing great excitement among the usually staid and steady farmers of that commonwealth. The gold is represented as being quite coarse, one nugget weighing five dollars.

Nevada.

The Comstock.—Since our last review of the ock market, says the San Francisco *News Letter* of March 24th, the bulls and bears have had each alternate days to themselves, and both seem happy at the prospect of gain in the future. The Savage bears, who sold so largely about a month ago at 700@840, seller 30 days, have filled and are at it again, offering 990 down to 930, seller 30 days. The sellers in Ophir and Yellow Jacket at 30 days do not feel so comfortable as the Savage sellers. . . . The body of the ore discovered in the ninth or lower level of the Ophir, has proven better than was expected. Some ore sent to one mill only cleaned up $27 per ton, this amount not yielding any profit to the mine. This lot was from the point

first discovered, and since then the ore has greatly improved and better results can be looked for. This clean up is handled by the shorts to intimidate the weak holders, and is, no doubt, the reason of the depressed state of the market; at the time of writing there is a better feeling and prosp ects of pr ice. . . tNte g new in Gould & C urry; the upper works coninud to yield the usual supply of ore. Nothing has been iscovered in their lower drifts. The drift north, towards Best & Belcher, is within 150 feet of the line, and they are now preparing to cross cut, and there is a show of finding ore. This is very important work, as the findings of pay ores at this point will be conclusive evidence of the integrity of the Comstock lead from Ophir to Gould & Curry. . . . The upper works of the Savage continue to yield about 50 tons of second-class ore of a very fair quality, with some first-class. It will take three weeks to complete the drift to enable them to work the sixth station, where the drift promises very large for the future. At the first of the month the most sanguine did not think that the upper works would have yielded the quantity of ore that has been taken out, and there are now no fears but that there will be ores enough to pay all expenses until the next station is opened. . . . There has not been much of any change in Hale & Norcross since our last; what change has shown has been for the better. They have suspended work on going north, owing to the dispute as to the line between them and the Savage. All the mines on this lead north fixed their east and west line so as to run east five degrees north, so in drifting from their initial point east as far as the Hale & Norcross have gone, brings them many feet north. The Hale & Norcross settled their south line with the Chollar by a due east and west line, and in the suit with the Bajazette Company they, by their own maps, make their north line also due east and west. This variation from a due east and west line makes one thirty feet of ground in dispute, and as it is the richest part of the lead, we can look for work for our lawyers. A decision in favor of the Hale & Norcross will add to their number of feet, as the lead dips to the east. . . . In the Chollar the drift from the new shaft is now in so far that they look for the lead daily. The stock is firm at $390@$395 cash, $400@$405, buyer thirty days. . . . The accounts of the drifts in the Bullion are conflicting; we do not think there is any quartz. There is one thing we learn which should not be surprising to owners in this mine, there has been another assessment levied. . . In the Yellow Jacket the lower drift from the south shaft has struck very fine ore, and the upper drift shows well and cannot be over 20 feet from the ore. When a stock is largely dealt in by sellers, 30 days, a great deal of allowance must be made of reports favorable or to the contrary, as they are whispered in your ear confidentially on corners of streets, which you have repeated, with an addenda, before you reach the next corner. From what we can learn of this mine, the assessment now over due will cancel every obligation the company owes. This will make the company mine out of debt, with the best mill in the State, capable of working ninety tons per day. If they have the ores on the lower level, this company must soon be paying dividends from proceeds of their mine, which will be the first dividend the company ever paid from this source. To state from whence the dividends this company have paid came from, would be only exhuming a subject that was putrid a year ago, and has only become more so according to the duration of its repose. . . . The Crown Point continues to improve at every stroke of the pick. All accounts agree that from the time Capt. Taylor took it in hand, up to the present time, it has been the best paying company upon the lead; and as they have their own mills, and which are near by, their ores can be reduced at less expense than any other mine on the lead. A correspondent to the *Alta California* gives the following interesting particulars concerning the Comstock lode: Work in earnest commenced about five years ago, and its total yield is probably about $45,000,000, including the following sums exported as the production of a few leading mines, up to the 1st of September, 1865: Gould & Curry, $14,000,000; Ophir, $7,000,000; Savage, $3,647,764; Imperial, $2,500,000; Yellow Jacket, $1,891,916; Belcher, $1,462,005. Total for six companies, $30,501,085. It has been estimated that five or six other companies have taken out more than a million of dollars each, and about two dozen other companies have taken out small sums. One million three hundred thousand dollars have been expended in litigation between the Choller and Potosi companies, and $1,000,000 more have been expended in the Ophir-Moscow trials. I know nothing of the truth or falsity of these rumors, but the expenses have been enormous; yet neither case has been settled by law, but in both instances, after a Killkenny cat fight, lasting for four years, the companies have compromised by splicing all that was left of them together. I believe that one-fifth of the proceeds of the Comstock ($900,000), would not more than pay the expenses of litigating the titles thereto. . . . It is stated that considerable interest is at present being manifested in the southwestern mineral fields of the State. Many exceedingly rich veins have already been discovered in that section. Generally the leads are but from two and a-half to four feet in thickness, but as they are (where worth anything) a solid mass of pay ore, they can be profitably worked, as it costs nothing for timbering, and there is no waste rock to hoist out of the mine. The ores are generally chlorides, argentiferous galena and copper. Ores assaying from $100 to $400 per ton, are quite common. Mills are much needed.

Humboldt.—The Virginia *Enterprise* of March 20th gives the following information in regard to some of the principal mines in the Truckee mining-district, gathered from Blanding, formerly superintendent of the Ophir Company's mill: This district is situated in Humboldt county, about sixty miles northeast from Virginia. At present there are but few miners at work there, those that are being engaged in running tunnels and sinking shafts on the Collins, Pacific, Rothschild and Moonlight series of ledges. Work has been suspended on the Imperial claim. We learn this company have disposed of a sufficient portion of their claim to Eastern capitalists to supply them with the necessary means to insure its speedy and thorough development. Among the principal claims in this district is the Geiger claim, owned by Dr. Geiger of this city. This is believed to be a very valuable claim. The Moonlight and Rothschild series of ledges are distant from this city about sixty miles, in a direction according to the compass a little east of north. These series consist each of three main veins, as far as discovered; and also of several smaller veins that are apparently feeders to the larger and stronger ones. The country inclosing these veins consists mainly of iron, limestone, sandstone and porphyry, strongly developed at points approaching to and at the mines; while to the northward, east and southward are found the extensive alkali flats and lakes so peculiar to this region, which seems to be the basin or intersection of the Humboldt, Carson and Truckee rivers. All of the veins on the west side of the range of mountains dip to the eastward, and run parallel with each other. These veins near the surface are about sixty-five feet apart. The metallic and mineralogical constituents of the veins in this district are very homogeneous, consisting of gold and silver, quartz, sulphides of iron and copper, traces of oxide of lead, and from one to two and a half per cent. of sulphide of lead. Assays from the Moonlight and Rothschild series run from $50, $100, $250 and upward of $500 per ton in gold and silver. The great want of this mining district is water for domestic purposes. The Truckee river runs within about twelves miles of the district, and affords sufficient facilities for all the motive power required in the reduction of the ores. The Pacific Railroad line runs within four or five miles of the mines, and probably within the next eighteen months trains will be running to this point. The ledges of the district vary from two to twelve feet in width as far as developed. The widest vein yet discovered is the Moonlight. The owners of this mine are making arrangements to sink a well near their claim, which, when completed, will be a great convenience to the miners residing in the district, as well as for prospectors and visitors. We believe the mines of this district are rich, as both assays and working-tests by mill process show; and with the introduction of capital, which is already beginning to turn that way, it will not be long before the Truckee mines will be producing a constantly increasing supply of the precious metals. Wood for fuel, and plenty of lumber and timber for mining purposes, is easily supplied by way of the Truckee river. Blanding informs us that the amount of galena in the Rothschild and Moonlight series is very trifling, and would not preclude the reduction of them in the ordinary Washoe pan or barrel process. The only additional treatment that he deems necessary would be the concentration of the undecomposed sulphurets after undergoing the pan or barrel process, in some one of the most approved concentrating machines now in use, and the reduction of the resulting sulphurets by roasting or any other desulphurizing mode deemed best after a trial. This mode would render the reduction of the metallic constituents thorough, and save a very large percentage of the precious metals contained in the ores.

Reese River.—The Austin *Reveille* says: A very beautiful specimen of mineral, having its surface flecked with native silver, was brought into our office to-day. It was procured in the Tuscarora mine, situated in Marshall Canyon, just above the Tesora, and about a quarter of a mile due south of the Whitlatch Union, to which it is a parallel ledge. The claim has been opened through an inclined shaft to the depth of seventy feet, in which water was struck in the first thirty feet. A well-defined ledge two and a half feet thick has been developed in the shaft, carrying at present a stratum of rich ore fully twelve inches wide, from which the beautiful specimen was obtained. The Tuscarora embraces 1,800 feet, and is at present owned by Blackfan, Buckley and Sinclair of the original locators. It is being worked night and day, altogether by hand power. . . . Superintendent M. D. Fairchilds, telegraphs from Austin, April 18th: Have struck good vein in Revenue Extension. Ore assays, six thousand six hundred and sixty-eight (6668) dollars per ton. Prospects favorable for large quantity, and few feet below water-line. Particulars by mail.

Colorado.

Benjamin F. Hall writes to Gov. Gilpin, March 21st, from Auburn, N. Y., as follows: My dear Governor—I omitted to inform you in my last that our friends in New York, who have invested money in Colorado mines, are settling down to the conviction that the methods of Europe of prosecuting the business of mining, and separating precious metals, as two essentially different, and therefore separate occupations, should be followed here, and that the new companies now forming are ordering their machinery and apparatus for one purpose or the other, and not for both. For mining alone, the means for digging, picking, blasting, lifting and transporting ore only are required; for separating the metals, the means for crushing, desulphurizing, smelting and cupelling only are required. For mining, machinery, apparatus, implements and teams required will not cost one-fourth as much as the apparatus for crushing and smelting. The mining business may be conducted by any practical business man, but the other requires a thorough knowledge of chemico mineralogical science. I think I hazard little in saying that Colorado mining, hereafter, is likely to take on these two separate forms. Our friends in the city write me that the morning after the dreary night of Colorado darkness is breaking brightly. Indian troubles made that night quite dark enough; but the general suspension of work in the mines, and consequent suspension of the stream of gold which flowed eastward constantly during the years 1861, 2 and 3, and a part of 1864, and kept up its credit, greatly increased its blackness. For a year and a half, as you too well know, scarcely anybody in this part of the country could be tempted to invest anew in Colorado property, or to expend much in developing that which they had previously bought. But during all that time, there has never been a doubt in the mind of anybody who ever went there, that gold and silver in vast abundance, slept in those hills. A thorough conviction of that mineralogical fact has kept alive whatever of interest that has existed until now, when it appears to be thought to be a propitious time for resuming work. This impression, which appears to be universal with eastern mine-owners, c annot fail, I think, to send you, this spring, a heavy force of practical business men and operators, more or less skilled in the art of mining and separating precious metals. Though the policy of the Government will ultimately, if seconded by Congress, as I think it will be, bring down the price of gold and silver in the market to something approximating the par of exchange, the cost of mining and separating the same metals will be reduced in a corresponding degree, and the business will long continue to be very profitable. Indeed, I know of no other legitimate business in the country which is, or will be, equal to it, when it is conducted with the system and economy essential to the prosperity of other departments of industry. It has this advantage over any other business in this or any other country: the product is money, substantially, itself. It is the basis of all other values, whether of real and personal property, or substituted paper mediums of exchange. In no conceivable contingency will the product fall below par in any market. And the business will be lasting. To all human comprehension those mines are inexhaustible. Sent up, as those ores were, from unfathomed depths in the earth, with the denser metals preponderating at the lowest depths yet reached, (400 feet), common arithmetic must be impotent to express the amount of gold and silver buried in those mountains.

Pennsylvania.

The Pottsville *Journal* of April 21st, says: The amount of coal sent by Railroad this week is 69,52103—by Canal, 36,004 10—for the week, 105,575 13 tons against 67,530 tons for the corresponding week last year. There is a turn-out among the hands at Port Richmond, which has cut off the trade to a considerable extent during the last three days, otherwise the trade from this region would have reached 120,000 tons this week. The turn-out at Port Richmond was caused by a reduction of wages from thirty cents to twenty-five cents per hour. There are also turn-outs at several collieries in this region, against a reduction of wages. The present prices of Coal are only remunerative at those collieries that are worked cheapest in this region. Many are losing money at present prices of Coal, and they must either reduce wages or stop. The trade sums up this week as follows compared with last year:

	1865.		1866.		
	WEEK.	TOTAL.	WEEK.	TOTAL.	INC. DEC
P & R R R...	46,726	914,057	69,521	985,534	71,477
Schuyl Can..	20,804	105,106	36,005	172,288	67,182
L Val R R...	29,914	496,490	29,653	555,476	58,987
Lehi'gh Can.	13,481	19,348	33,392	53,790	34,442
Scrant Sth...	19,208	189,861	22,894	248,516	58,655
" Nth...	4,850	43,057	7,814	96,056	52,999
Penn. C C...					
By Railroad..		95,943		100,719	4,776
By Canal....					
Del and Hud.			25,960	25,960	25,960
Wy'ng Sth...					
do Nth...					
Shamokin....	9,719	66,359	10,254	111,979	45,620
Trevorton....	857	6,612	1,363	12,353	5,741
Short Mt....		16		7,802	7,796
Franklin. ...		16,090		6,789	*d*9,307
Broad Top...		61,453		36,291	*d*25,162
	145,559	2,014,392	236,856	2,413,553	
			145,559	2,014,392	
			91,297	399,161	

The shipment again shows a large increase over the correspondent week last year. The strike among the miners in the Cumberland region still continues, and many of the boatmen on the Chesapeake and Ohio Canal, it is stated, are leaving in consequence, and seeking employment elsewhere. Our correspondent at Mauch Chunk, has kindly sent us the following rates of toll and transportation on Coal from Mauch Chunk to New York and Philadelphia, via Lehigh and the other canals:

TO PHILADELPHIA.

Toll on Lehigh Canal	48
Do. Delaware Canal	42
Towage from Bristol	09
Freight from Mauch Chunk to Philadelphia	1 00
	$1 99

TO NEWARK.

Toll on Lehigh Canal	58
Do. Morris do.	1 20
Freight from Mauch Chunk	
	1 30
	$3 08

TO JERSEY CITY.

Toll on Lehigh Canal	58
Do. Morris do.	1 07
Frieght	1 40
	$3 05

TO NEW YORK VIA MORRIS CANAL.

Toll on Lehigh Canal	58
Do. Morris do.	90
Freight	1 45
	$2 93

TO NEW YORK VIA. DEL. AND RARITAN CANALS.

Toll on Lehigh Canal	58
" Delaware Canal	42
" Delaware and Raritan Canal	50
Towage from New Brunswick	25
Freight from Mauch Chunk	1 25
	$3 00

The rates from this region are considerably higher,

and places our coal operators at a great disadvantage in that market, as the following figures will show:

BY RAILROAD.

Transportation from Pt. Carbon to Pt. Richmond.	$2 08
Freight from Pt. Richmond to New York.....	1 65
	$3 73

From Schuylkill Haven 8 cents per ton less.

BY CANAL.

Toll from Pt. Carbon to Philadelphia.....	$1 03
Freight from Pt. Carbon to New York.....	2 65
	$3 68

From Schuylkill Haven 8 cents per ton less.

Allowing 10 cents for transhipment, at Port Richmond, a ton, the rates are 83 cents higher via Port Richmond, and 68 cents via Schuylkill Canal, from Mauch Chunk to New York. Our transporting companies will either be compelled to allow a drawback on the trade to New York and vicinity, or reduce their rates. The trade from Schuykill cannot compete with so great a difference in prices of transportation. The proposed branch railroad leading from near Barnsville into the Lehigh Region, will be 15 miles in length. A corps of engineers have examined the route and pronounce it favorable for the construction of the proposed branch. . . . In the forty-six years since 1820, the four great anthracite coal fields, the Schuylkill, Lehigh, Wyoming, and Lackawanna and Shamokin, have sent 134,121,549 tons to market. The first decennial reported 359,190 tons; the second, 6,261,197, an increase of 164 per cent; the third, 19,373,429, or 21 per cent.; the fourth, 56,954,864, or 19½ per cent.; and the six years from 1860, 52,172,869, or 8⅓ per cent., being at the rate of 86,954,780 tons for ten years from 1860 to 1870; which is 29,999,916 tons in excess of the ten years previous. Notwithstanding this, during 1865 there were no less than 685,050 tons semi-bituminous coal imported to the United States from England and the British provinces. The aggregate cost of this coal to the American consumer, if we put it at the low average of $7 50 per ton, was not less, in round numbers, than $5,000,000. . . . The Cumberland *Civilian* says that the strike among the coal-miners still continues. The companies first proposed reducing the price of mining from seventy-five to fifty cents per ton. The miners refused to accept of this price. Sixty cents was then offered, which was also refused. It was rumored a few days since that a compromise had been effected, and that work would go on at sixty-five cents. The result of this state of affairs is entire stagnation in the coal trade. Hundreds of boats are lying idle at the wharves, and the boatmen are getting discouraged, and are seeking other pursuits.

Utah.

The *Vedette* of April 2d furnishes us with the following facts concerning Stockton and its mines: The Rush Valley mines were discovered in the month of April, 1864, by some members of company "L," 2d Cavalry, California Volunteers, who were guarding stock on the Government Reserve. Assays from the first ledges discovered proving them to be rich in silver, a mining district was organized, and prospecting parties started out in all directions, and in a very brief space of time many hundreds of claims were located, each and all presenting the same general indications of an extensive deposit of argentiferous galena. Indeed, to use the expression of an old California prospector, "the entire mountain seemed one vast bed of ore." To make assurance doubly sure as to the real value of the mines, specimens from different ledges were sent for assay to New York, Denver, San Francisco, Marysville and Austin, returns from which assays were of such an encouraging character as to assure the most incredulous of the real and surpassing richness of the district. Being satisfied with the results thus far, some enterprising individuals organized a town company, and the city of Stockton was surveyed and laid out near the eastern extremity of the valley, thirty-eight miles west from Salt Lake City. The first house was built in July of the same year, and the place now contains forty families and four hundred inhabitants—the most of whom are directly identified with the mining interests. The city is pleasantly located and remarkably healthy—not a death having occurred in the place. It is watered by a ditch seven miles in length, which conducts the water from a small stream in the West Mountain. In the near vicinity there is an abundance of wood and timber, and several coal mines have been lately discovered in the hills adjoining. Its facilities for obtaining supplies at all seasons are unsurpassed—there being four flourishing Mormon settlements within ten miles, where goods can be had at Salt Lake City prices. We understand that the Overland Mail Company intend to run their stages through Stockton this season, and it is directly on the route of the Pacific Railroad. Up to the present time seventy different ledges have been worked more or less, and all of them have demonstrated the important fact that the galena decreases and the silver increases from the surface downwards. Soon after the organization of the district, Mr. James Finnerty, a practical and energetic miner, erected a small trial furnace for the purpose of testing the feasibility of smelting the ore, and about the same time a large one was built by the "Rush Valley Furnace and Smelting Company," both of which were but partially successful, owing to the imperfect quality of the fire-brick used. Subsequently Mr. F. built a second furnace and run it with good results for a number of weeks, turning out a large quantity of metal from surface ore, and fully demonstrating that the mines could be worked cheaply and profitably by the smelting process. He is now engaged in building a furnace, in connection with the Knickerbocker Company, on the Lyons' Process plan. The Monheim Company have a blast furnace nearly complete, and are taking out first-class ore from Delmonte and Great Basin ledges. A shaft thirty feet down on the Silver King or "Boston" ledge has just disclosed exceedingly rich ore—the reported assay of which we will not venture to publish until we see the papers. We are fully satisfied, however, that the present season will show that we have hitherto been overmodest in our praise of those mines, and that the most enthusiastic in their favor have far under-valued them.

Arizona.

We take the following from a letter of William Thompson, Superintendent of the Great Central Mine, Arizona, to the Secretary of the Company, under date of La Paz, Arizona, March 16th: "The Indians at Big Bug set fire to a miner's cabin a few nights since, in which two miners were sleeping. One of the miners was badly shot with arrows as he ran out, and cannot recover; the other escaped unharmed. Three soldiers, deserters from the Native Arizona Cavalry, visited a place about eighty miles from here, on the road to Prescott, where two men were digging a well, and had what they wanted to eat and drink. After one of the men went down the well, they shot the other, and he fell into the well dead, his body going to the bottom—eighty feet. They then took what they wanted and left. The mail-carrier, Mr. Duff, found the other man in the well alive, and took him out. One of the murderers came into La Paz last night, and we have got him chained to a blacksmith's anvil, having no jail to confine him in. As the mail closes immediately, I cannot tell you what disposition will be made of him." . . . The shaft on the Vultule gold ledge, at a depth of 40 feet, shows richer rock than ever before struck in that section—richer, by considerable, than that at the surface. Tyson's mill is doing well crushing this rock. The United States is also turning out a very fine mine. At Williams' Fork the copper mines are turning out finely. The Colorado Steam Navigation Company's barge passed La Paz, going down the river, on the 27th of February, with a full load of first-class ore from the Planet and Mineral Hill mines, and a large quantity of ore from these and other mines is reported ready to be taken down to the landing as soon as the water in Williams' Forks, which was very high, subsided, to allow the freight teams and pack trains to commence running again. The Great Central upper mine (Eliza ledge,) had turned out a splendid mine. The foreman reports over two hundred tons of rich ore out, ready for smelting, and a very large vein of black oxides had been struck in the shaft. The company's provisions and supplies had reached the mouth of Williams' Fork, eight or ten miles from the mine, and the steam engine, boiler and smelting works were expected up from the mouth of the river by the next steamer.

Washington Territory.

A correspondent of the San Francisco *Bulletin*, from Walla-Walla, says: People of this section of country are very greatly excited about the Blackfoot mines. There have been no gold mines discovered in that entire region of country, the favorable reports of which are so universally confirmed by each successive arrival; and even the Florence, Salmon, or Boise diggings never created so much comment and public confidence. By reference to a map you will observe that the unpretending town of Walla-Walla is upwards of thirty miles from where the boats running upon the Upper Columbia river stop, and from the situation of the place, must necessarily form a grand entrepot for the rush of miners, travelers, and of trade, that are now setting in towards the Blackfoot mines from Oregon, California, and the Eastern States. The Blackfoot mines are located on the eastern slope of the main chain of the Rocky Mountains, some 450 miles from Walla-Walla City, in Washington Territory. The "diggings" are found on the very head branches of the Missouri river. Most of the claims are paying from $20 to $100 per day to the hand; the gold is coarse in character, worth over $18 per ounce. Fort Benton is at the head of steamboat navigation on the Upper Missouri river, and is 150 miles north of where the mines are found. The distance from Virginia City (Beaver-Head country) is less than 120 miles. So far as a permanent line of travel is concerned, it must go by the way of the well-known wagon route constructed by Capt. Mullan of the United States Army, during the years of 1859-60 and '61. The particulars of the opening of this route I presume you are familiar with, as they were furnished your columns at that time. This road, leading to the mines, thence to Fort Benton (600 miles in extent), was initiated by John B. Floyd, when Secretary of War. It was opened as a military road, and Congress has expended upon it the handsome sum of $300,000. The purpose of making it was for the transportation of government troops from the East, at less expense than it was then thought could be done by the usually selected route.

Montana.

A letter from Helena, in the Walla-Walla *Statesman*, speaking of the Vigilantes, says that the organization was in full force, numbering sixteen thousand in the Territory, and was constantly increasing; that it was as perfect as the Parisian police system, and had been the great moral balance-wheel which had kept the Territory in anything like a civil or safe condition; that though some bad men had found their way into it, yet it was controlled by the best men in the country; and that it was a great social and personal safeguard to the civil and honest, and a terror to the lawless and desperate.

Ohio.

A correspondent of the Cleveland *Herald* announces the alleged discovery of gold in Youngstown, Ohio. He says the discovery has created no small excitement among those on whose lands it has been found, or probably may be found. That it is gold, real gold, has not been definitely established; but it is gold enough to "set up" considerably some of the parties concerned.

Indiana.

The Indianapolis *Journal* says: "We have seen and examined some gold from Brown county, and it is as near the pure metal, and is found in as large quantities, as it is in California. Old miners say that the mines in Brown county will pay equally as well, if not better, than the mines of the golden El Dorada."

Colombia.

Recent correspondence from Tumaco says: The existence of gold in this and the adjoining States, has long been known; hence it is no new discovery. The old Spaniards worked the mines as the Indians had done before them, and up to the time that slavery was abolished in the country, the landed proprietors were able to derive handsome revenues from their gold-bearing property, although the means at hand to extract the precious metal from the earth were of the rudest description. As soon, however, as the negro became free, he refused to work, and the owners of the land, from inability to procure labor, were compelled to abandon the enterprise. . . . It has only been within the past year that particular attention has been called to the gold mines of the Cauca, or that attempts have been made to make them profitable, and the success of one man, combined with highly-colored reports of the facility with which gold could be procured, caused the tide of human beings to commence its present flow from California and elsewhere; a tide that will very soon be at its height, and that will commence its rapid ebb, for the majority will find themselves sadly disappointed men. That there is gold in the country, and plenty of it, there is not a shadow of doubt; as much, if not more, than has been found in California; but those seeking it never appear to have considered before coming to the country the nature of its climate, its people, and the thousand and one difficulties they would have to encounter before ever being able to procure a foothold or ability to work a mine without constant annoyance. These difficulties are as follows: To begin with, the locality is almost on the equator, and, being very low, the heat is intense, making it impossible for a Northern man to work without soon being overcome. The rains are constant and heavy, rendering the atmosphere very damp and unhealthy, and causing a foreigner to contract an intermittent fever very soon after his arrival; and after leaving the few spots termed towns or villages, scarcely a place can be found where a foothold can be obtained without first clearing away the dense growth of timber and underbrush. The roads through the country are nothing but Indian trails, almost impassible except to the natives; and they are very few, only between important points. These I have mentioned are some of the minor evils; the others are even more important, and form the greatest drawback to the present emigration of foreigners, especially Americans. The property owners, although unable to procure labor to work their mines, do not care to allow foreigners to take hold of their land and bring out its wealth unless they receive the lion's share of the net proceeds. A contract can be made on something like the following terms:—A tract of land can be leased, of which nothing is known, provided the party leasing will agree to bear all the expenses of opening the country and discovering if gold exists. If it is found in quantities making it worth while to continue, then the owner is to receive one-quarter if the yield is so much; one-third if so much more, and one-half if beyond a certain amount. In this manner the proprietor is certain of being no worse off than at first, while he is certain of becoming very rich without the least trouble or expense, if the mine realizes expectations. The native population are very jealous of the large American element now arriving among them, for two reasons: the first is that the white natives, being in all cases bigoted Catholics, do not desire so large a Protestant influence introduced into their midst; and the negro population, now vastly in the majority, do not desire so many white faces, fearing that if the emigration continues they may lose the power they now possess and desire to retain. Both these reasons are certain to exercise a powerful influence against emigration, and will be a stumbling block in the way of its increase, unless arrangements of a satisfactory character are made with the government at Bogota whereby the emigrant will be secured in his rights, and rendered safe in person and property. The only means of transportation between this point and Barbacoas is by canoes, cut from solid logs, and capable of holding with some crowding say ten or twelve men. The time occupied is from four to seven days, and the trip is one of exceeding discomfort. Leaving this point you go outside a distance of about twelve miles to the entrance of the Patia river, and up this stream to a branch called the Telambi, on which is located Barbacoas. You can enter the Patia river with sixty feet water at high tide, and a steamer drawing nine feet can go within three or four miles of Barbacoas; at this point there is a shoal, over which not more three feet can be carried. A small steamer, or two of them, to be put in the business of carrying freight and passengers to and from this port and Barbacoas, would now prove a mine of wealth to the owners; for, notwithstanding the unfavorable reports given, the traffic must continue to be very large. Tumaco is now as it were the sea-port of Barbacoas, and yet there is no necessity of its being so, when steamers can enter and go up the Patia river for a long distance, thus cutting off a very large portion of the route. Tumaco reminds me of the Malay villages I have seen in some of the least civilized of the East India islands. They are constructed entirely of bamboo, and thatched with palm leaves. They are raised about ten or twelve feet above the ground, and exhibit no signs of comfort or convenience; and, besides, they are filled with all kinds of venomous reptiles, principally the centipede, which is found from six to eleven inches in length. The town has, I suppose, about seventy houses, and town lots are getting to be very valuable. One that a month since could have been bought for a hundred dollars is now held at two thousand. Yesterday board and lodging could be had at eighty cents a day; to-day a meal, consisting of two eggs, a small piece of fish, and a cup of coffee, costs one dollar and a quarter; so much for the rush of passengers. Ten dollars per head is charged for passage to Barbacoas. The entrance to the port of Tumaco is good; eighteen to twenty feet can be car-

ried over the bar at high tide, and inside from five to ten fathoms can be found in the channel way, which, although deep, is narrow and intricate, and should never be attempted except with a good pilot. The scenery is beautiful, especially as you cross the bar. Regarding the climate here: It rains more or less nearly every day in the year, although for a month past there has been none, which, the natives say, is all owing to the number of foreigners that have arrived. That it is not, there is no need of my saying, when the latituds is considered, it being but one degree forty-five minutes north. A portion of the day they have a sea-breeze, but when night sets in this departs, and in its place comes a close, stifling atmosphere, heavy with a dew that will saturate clothing in a few minutes. This is anything but pleasant or healthy, and forms a great contrast with the delightful atmosphere of Panama at night. The most terrific thunder and lightning prevails during most of the year, and in the vicinity of Barbacoas they say that every afternoon it is as if there were a terrible battle going on, so sharp is the lightning, which appears to strike in every direction around you, and so heavy the peals of thunder. The class of men now arriving from California are principally those who come without more than money enough to pay their way to Barbacoas, expecting, on arrival there, to jump into work and wealth immediately. I saw men to-day who, with pick, shovel, pan, blanket and small carpet bag, had no money to pay boat hire from ship to shore. With all such, immense suffering will be the result; for they will not be able to procure work, and, without the means to obtain a living, sickness, destitution and many deaths will be the result. Some of those who came by the Parkersburg, wisely seeing how affairs are, determined to return to Panama; and the United States Consul, W. B. Little, Esq., who came from Panama by the Parkersburg to look after the interests of citizens of the United States in this vicinity, has advised those who could do so to leave the State until a better opening appeared. Consequently, at his request, the steamer will carry back to-morrow some of those she brought, and others who have been to Barbacoas and seen the "elephant;" about thirty in all. Could she remain a few days longer, her passenger list would be very largely increased. Some parties that have left Barbacoas for the interior, to make examinations of the country about the higher grounds, have yet to be heard from, and the result of their explorations is anxiously looked for; for, if favorable, great exertions will be made to locate upon government lands, where extortion will not be practiced to so great a degree as in the lower country. There remains at Barbacoas quite a number of men who have nothing to do, and no money; how they live no one knows. Many have been sick with fever, two have died, and others will die, if no means can be procured to get them away from the place. They cannot walk away, and no canoes can be found to take them, unless the usual fare is paid; for the natives will not abate in price even to a sick and dying man. It is necessary, exceedingly so, that the government of the United States should at once appoint a consul or commercial agent to Barbacoas, to look after the sick and destitute Americans that will soon be found there, and to see that no imposition is practiced upon the many now in, and that will be coming to, the country. This consul must not be a political appointee; he must be a man familiar with the country, its people and the language—a man equal to the occasion; for one of any other description would be useless, and would be an impediment rather than an assistance to those he is called upon to serve. Such is an outline of the present condition of the mining prospects of this region of country. I hold to the opinion that the land is rich with gold, and will yield immensely to those who go the right way to obtain it. I desire to encourage those who have money enough to begin properly to come to the country, for I feel confident of their ultimate success; the more of this kind that come the better it will be. And once let half a dozen companies of the right stamp get fairly to work, and the prospect will improve every day, not only for them, but for others of a poorer class.

New Granada.

A Mr. Brooks, lately from Barbacoas, states that he landed at the port of Tumaco, paying $60 for passage from Panama to that port, and $10 New Grenadian currency (80 cents American coin to the dollar,) from thence to Barbacoas—meals not included. The distance from Tumaco, up the Patia and Telambe rivers, to the town of Barbacoas, is about 55 miles. There is no road worth mentioning between the two points, and prospectors anywhere beyond Barbacoas must hack their way, step by step, through the dense undergrowth and chaparral, with the macheta. On arriving at Barbacoas, he found that there was but a single claim which had paid a single dollar. This claim is situated on the estate of the Governor of the State of Cauca, and is situated 11 miles above the town of Barbacoas, about 300 yards from the river Telambe, and is in an old river bed, under a bluff, which can only be reached by tunneling, precisely like the diggings at Chile Gulch, in Calaveras Co., California. The claim was discovered in this manner: O'Connor & Livingston, (the latter a brother-in-law of Sandy Bowers, of Virginia City,) had prospected around the country for some months without success, and Livingston had already written home to his friends for money to get back to California with, when they fell in with Adolphus Price, a German, formerly of California, who has been ten years in Cauca, in the town of Tumaco. He assured them that Indians, negroes and others often brought in small lots of gold from the country back of there, and that there must be mines somewhere in the vicinity. Mr. Price induced them to go to work on the land of his father-in-law, the Governor of Cauca, they to pay one-half of all the gold taken out to the owner of the land, and pay their own expenses out of the remainder. They ran several tunnels, 60, 80 and 120 feet in length, into this bluff, and finally struck what proved to be a rich paying streak of gravel. The gold is in clean, handsome, flat pieces, or scales, worth from five to ten cents each, on an average, and of good quality. This mine they call the Cargazon. In January last, Livingston sold out his interest in the mine to O'Connor for thirty-five pounds avoirdupois weight of gold, and he has now gone home to Scotland. Twenty men—six Americans and fourteen natives—are now working in this mine, and the average product is 30 to 40 pounds weight of gold per week. Adjoining the Cargazon is the Costa Rica claim, also owned by O'Connor & Livingston, which is now being opened in the same manner. The gravel is carried down to the bank of the Telambe, and there sluiced. Beyond this, not a single paying mine has been found. There were, when Mr. Brooks left, some fifty or more Americans prospecting along the base of a range of low mountains skirting the valley of Cauca, in search of mines; but up to that time nothing had been struck worth working, although good "prospects" were occasionally struck. It rained continuously during January, February, and up to the 10th of March in that section, and everybody exposed to the weather for any time was ill with the chills and fever and coast fever. Mr. Brooks saw several persons come in from the mountains too ill to prospect longer, and content to abandon the country while they could get away. Living was not extremely expensive, but none of the comforts of civilized life were obtainable, and there was no work of any kind to be obtained by strangers. Money was no object there, as there were no claims to be bought into. . . . A correspondent of the *Herald* writes from Tumaco, March 21st, as follows: The only mine now in successful operation is that of Mr. O'Connor, an American, who went to Barbacoas about a year ago. He has a contract such as I have mentioned, and although he had all the risk to contend with at first, still the result since has rendered it certain that both the owner and himself are destined to become very rich men. In six months time he, by his own acknowledgement, has taken out about four hundred and ten pounds of coal, worth about ninety thousand dollars; others say the amount is much larger. The O'Connor mine is about nine hundred feet in length, of which he has opened but a very small portion. He has taken out in one week forty-nine pounds, and, from present indications, he feels confident of doing much better. He leaves for New York by the *Parkersburg*, carrying much of the gold with him, and I have no doubt, on his arrival there, he will make more known of his prospects than I have been able to obtain from him, with a view to bring the country properly before our people, and interest those who have the means to go into the enterprise with capital sufficient to make it pay. Another gentleman, a Mr. Farrand, has also secured valuable privileges in the vicinity of Barbacoas, and he also goes to New York to procure the material necessary to carry out his plans, which are well laid to produce important results.

Mexico.

Lower California.—A correspondent of the S. F. *Bulletin* writes that the sale of the Triunfo mine and mills to eastern capitalists is an important and fortunate event for this Territory. The company's liabilities here amount to $50,000. Henceforth our money-lenders will hardly be able to obtain four and five per cent. monthly interest, as they have for the past two years. This property, consisting of ten stamp-mill and five mines—the Carnen, Santa Fe, Valenciance, Mendozena and Triunfo—have been consolidated with those of the Philadelphia Company. These mines are not surpassed in richness by any other in the San Antonio or Triunfo District, and consist of the same class of ores that have been so successfully and profitably mined and shipped by the Mexican Company for the past seven years. The Mendozena and Molinena, both on the same vein, are now producing an abundance of mineral. In the last-named, a very large deposit, that pays $250 to the ton, has been discovered. The Mendozena, which has a vein from 10 to 20 feet wide, is opened with an incline 300 feet deep, and very little ore has been taken out otherwise than from the levels, which extend from the shaft at regular intervals, all of which ore runs in pay rock. Mr. Brooks, agent of the company, left here on the November steamer, and during an absence of less than twenty days from San Francisco, accomplished the sale of the property. This success is evidence of confidence established among eastern capitalists in the value of our mines. Mr. Brooks goes to San Francisco on this steamer to purchase the necessary machinery to add fifteen more stamps. In the meantime, a large amount of ore will be taken out of the mines ready to start the mill again in August next.

British Columbia.

The Dalles *Mountaineer* has information that recent gold discoveries have been made on a creek which empties into the Columbia, between Upper Arrow Lake and Lower Arrow Lake, from the east side. These diggings conform to the general character of all the discoveries yet made from Big Bend south, and have created a great excitement at Colville, many persons having started up the river in boats.

Oil Summary.

Pennsylvania.

A new well called the Legal Tender was struck recently on Lease 79, on the Green Farm, West Hickory, near the mouth of that creek. It is yielding 40 barrels first quality light oil—first quality, 43 gravity. Its depth is 223 feet, bottom of second rock. It is on the property of the Great Hickory Oil Mining Company, H. W. Chipman, Superintendent. There are seven producing wells on the property of this Company. On the 21st instant, another well was struck on another of their leases, No. 112, lubricating oil, 35 gravity. It is yielding 30 barrels a day. Sixty more leases are taken on this property for putting down wells. The Company are storing their oil. . . . . The Pioneer Oil Well, near Putneyville, Armstrong county, Pa., on the 23d ult., at a depth of 850 feet, struck a vein of salt water, mixed with oil; indications favorable. New territory. . . . . News from the comparatively new territory on Island Run announces a good strike by the Donehoo Oil Company. This well is located in the gulch a few hundred feet above the Williams Well, which is said to be one of the best in the Island Run oil regions. The Donehoo promises to be an excellent well. The Economy Oil Company had a fine show of oil on the 31st ult., at a depth of about 660 feet. This well is within a few yards of the Williams. . . . . Operations in Summerhill Township, Crawford county, Pa., have resulted in the discovery of good indications in the Holmes Well—sufficient to justify the insertion of tubing. . . . . The Tidioute *Chronicle* says: "The past week has developed the fact that there is oil on Dennis Run—how much remains to be seen. The Midas Company's well near Henry's Mill, was tubed at the depth of seventy-two feet, and has since been pumping a small quantity of excellent lubricating oil. The well will probably be drilled deeper; it has hardly entered the first sand-rock. Meanwhile, other wells are going deeper, and more territory leased. Passing up the Dennis Run road, a half mile beyond the Slocum Well, we reach the east branch of West Hickory Creek, where the property of the Triumph Oil Company is located; this property, which is regarded with much favor by oil men, consists of about two hundred and forty acres, and extends from Denis Run to beyond the West Hickory—the latter stream running nearly through the center of the tract. Ten wells are going down, and others about starting; the deepest well is down over four hundred feet. The Company is giving leases and selling in fee. On the adjoining tract, W. W. Wallace has an engine, etc., and is about to put down a well. On the next, owned by A. Wallace and others, a well is down two hundred feet. Then comes the property of the Grove Farm Oil Company, consisting of over four hundred acres. Two wells are going down; others will soon follow. Passing the Scott and Beatty farms, on each of which wells are going down, we come to the Miles farm, on which are a couple of producing wells and a number drilling. On the Gorman property, wells are under way, but none have reached the requisite depth; and the same may be said of the Fleming tract. On the latter the new town of Hickory Center is springing up, and a number of hotels, stores, dwellings, etc., have been erected, Next is the White farm, with its seven producing wells, five of them yielding heavy oil—the total yield is not far from two hundred barrels per day. There are several other wells on this property, not now pumping. Below, and adjoining the White farm, is the Monroas farm. Here are an immense number of derricks going up and wells going down; also, a few producing wells, yielding in the aggregate about one hundred barrels of lubricating oil per day. On this tract is Sheridan City, the most important settlement, in appearance, on the creek, and——that is not saying much. The next, and last tract, extends to the river, and is owned by the West Hickory Oil Company, on which are several wells, producing from five to ten barrels each per day. As a matter of course, when you find oil you can find a "city" near by. The one here is called Livingstone City, so named after somebody, but we don't know who. It is a peculiar place—every alternate house is a saloon, one-half of the balance are restaurants, and the remainder are hotels; the hotels are all furnished with bars. We should state, in justice to the city, that there are three exceptions to this rule—a billiard-hall, where whisky is "dispensed," and two offices, each furnished with a side-board. Sheridan City has one church; he owns an institution called a sweat-board, and earns his bread by the sweat of his board. The inhabitants are a very economical set; they import barrels of whisky and export barrels of oil—thus saving freight on "empties." It is a wealthy community, and but few appear to labor; here are to be found many "professional" gentlemen—generally astronomers. An enterprising firm have leased a strip of land having a river front of fifty rods, and are about erecting store-houses, wharves, etc.; they will keep whisky on deposit only. "Take it all in all, we ne'er shall look upon its like again"—if we can help it. But West Hickory is fast becoming developed; this summer will reveal its hidden treasure at the head-waters.

Ohio.

A letter from Marietta, O., of March 29th, says: No small stir has been made hereabouts in regard to some splendid oil strikes that have lately been made in that wonderfully prolific oil region known as White Oak, some eighteen miles south of this city. The great Harkness and Longmoor wells had already made that wild region quite famous, and yet more recently the Atwater well has commenced throwing out a heavy stream of lubricating oil that throws the other famous wells into the shade. The enormous quantity of five hundred barrels per day is claimed for it, and on good foundation too. This well is just above the Harkness, in the mouth of the first ravine on the right. It is a magnificent fortune to its lucky owners. The Wild Wagoner well, on Marietta Run, a branch of White Oak, has commenced pumping oil in paying quantities, as I am reliably informed. But perhaps the finest strike that has been made in that region, is the one lately made by a small company called the Marietta and Gale's Fork Petroleum Company. Their lease is on Gale's Fork of Lick Run, just over the head of White Oak. They struck oil at the depth of 164 feet the latter part of last week; got their pump in on last Monday afternoon, and commenced the "experiment." The oleaginous fluid soon made its appearance, and in a steadily increasing flow filled a fifty barrel tank with a beautiful amber-colored oil, of the specific gravity of 26 degrees, in three hours and fifteen minutes! It is averred by the contractor that the last half hour produced thirty barrels, which is at the rate of 700 barrels per day! This is enormous, and created intense excitement. It did not take long, after this news was spread, as upon the wings of the wind, to absorb every inch of territory on this stream. . . . The Gallipolis *Journal* says that on Monday of last week a thirty-barrel oil well was struck at Camp Creek, above that place. At

fifty-five feet, with a spring pole, they pumped thirty barrels of oil on that day. . . . The Lexington Mining Company, engaged in boring near Alliance, Stark county, at a depth of 212 discovered a show of oil on Tuesday last. This is new territory.

Illinois.

The Ottawa *Free Trader* says: A flowing well has been struck near Unionville, on the Vermillion, about fourteen miles south of this city. Messrs. Bradford, Ewing, Moore & Vankirk have for some time past been working a coal shaft there. Their shaft is about fifty-eight feet deep. About a week ago they commenced boring through the sand rock at the bottom of their shaft to ascertain the depth below them to the second coal vein. They had gone down some twenty feet, when, to their surprise, they struck oil. It came up, they think, at the rate of a barrel an hour, but as there was a good deal of water in the bottom of the shaft, it was impossible to gather the oil except as it passed through this water. So they have plugged up the bore until they can more effectually drain the coal shaft. They are very confident, however, that they have a paying well. The oil is very pure, and in its crude state makes a very good light.

Michigan.

A correspondent of the Detroit *Free Press* writes from Niles, Michigan, last Saturday: "The St. Joseph Valley Petroleum Company at this place is driving the six-inch tubing as rapidly as it can be done. The tubing is now down 161½ feet. The strata penetrated were 20 feet sand and gravel, 6 feet sand-rock, recent formation, 20 feet sand and gravel, 110 feet fine white clay, mingled with fine quartz sand, suitable for the manufacture of porcelain, and 10 feet quicksand. In the quicksand there is an unmistakable show of petroleum, in the smell and color of the sand, as well as the oil that is brought up in the sand-pump. Quite a flow of gas is continually passing through the tubing. None of the stock is in market, and there is a refusal to sell lots in the vicinity of the well at large advances over prices asked two weeks ago."

West Virginia.

A company boring for oil on the farm of William Cunningham, situated in Jackson county, in going down, went through a vein of metal about eighteen inches thick. The company took no particular notice of the borings, but continued drilling until they became satisfied their efforts in search for oil were fruitless, when they abandoned the well. In recurring to the strata through which the drill had passed, the owners thought of the metal vein, and immediately concluded to have it analyzed. A quantity of the metal borings was sent to this city where it has been assayed and pronounced to yield ninety-eight per cent. of pure silver. Underneath this vein, which is three hundred and forty feet from the surface, is a vein of silver quartz four feet thick.

Canada West.

A correspondent of the Sarnia *Observer* writing from Oil Springs, says: "The acknowledged oil lands in Dawn embrace an area of about 53,200 acres, the southern boundary of the field being the fifteenth Concession line. It is now conceded that the entire township of Enniskillen is a producing region, numbering 86,800 acres. The developed portions, however, do not exceed 5,200 acres, and these are only tested here and there. Lots 16, 17, and 18, in the second Concession, and lots 15, 18, and 19, in the first, have the greatest number of wells, too many, indeed, for intelligent and profitable farming. Within the past fifteen years nearly all territory might have been purchased for from fifty cents to two dollars per acre. At the present time it represents an aggregate value of $25,000,000. For agricultural purposes it is worth, perhaps, five dollars per acre along the line of the rail or plank road. Remote from these arteries of transportation, its value is in proportion to the purchaser's desire for seclusion, nothing more.". . . The London (C. W.) *Reporter* says; The Peninsular oil district, comprising the county of Essex and a portion of the county of Kent, is situated between Lake Erie and Lake St. Clair, with Detroit river as its western boundary, and from recent scientific surveys, as well as from numerous partial developments, is promising extremely well, and we should not be surprised to learn within a few months that it would be numbered among the important oil regions of Canada. In fact, the developments already made seem sufficient to convince the most sceptical that oil will be found in this district, and that, too, probably in large quantities. The well at Belle river, in the township of Rochester, has had two excellent shows of oil, and they are now ready to pump. Good judges who have seen it give it as their opinion that they will obtain oil in paying quantities. This well has now attained the depth of nearly four hundred feet. It is being put down by a Detroit company, who are so sanguine of success, that they have lately commenced a second well a short distance from the first on Belle river. The Tibury well, near Smith's Mills, has been sunk to the rock, and the engine is on the ground and drilling in the rock commenced. In this well there was a strong show of gas, with a fine show of surface oil. Several gallons of a superior quality of surface oil were taken up in the sand pump. Mr. Lick, one of the oil pioneers of Canada, is largely interested in this well and territory around it. Hyslop and Ronald, of Chatham, are also largely interested here, and we hope that their prospects will be fully realized. There are also many other wells going down in different parts of this peninsula, two in the Township of Mersea, one in Malden, one in Sandwich, one in Maidstone, and several others which we are unable to locate, all in various stages of completion, so that this region will soon be thoroughly tested. According to the report of Henry White, P. L. S., this district is entirely underlaid by the corniferous formation, or oil-bearing rock, and the mani anticlinal or "oil belt," passes through the peninsula in a south-westerly direction, the same extending easterly along the line of the river Thames, through the producing district of Bothwell. The disinterestedness of this report ought to entitle it to credit, even if Mr. White was not known to be a man of integrity and profound research in the science which he professes.

Texas.

The New Orleans *Picayune* says that petroleum of great purity, and in large quantities, has been found in Angeline, Trinity and Nacogdoches counties, Eastern Texas.

Comstock Silver Mines.

The following is a list of claims on the Comstock lode:

COMPANIES.	Length in feet.	Depth expl'd.	Length of lode expl'd.	ENGINES: Number.	ENGINES: Ag'gte pow'r.
Utah	1000	260	300	2	..
Allen	925	200	300	1	..
Sierra Nevada	2157	410	400	2	..
Union	302	80	....	..	..
Ophir—N. mine	1200	428	400	2	..
Mexican	100	620	100	..	..
Ophir—S. mine	200	620	200	..	..
Central	150	428	150	1	..
California	300	428	300	1	..
Central No. 2	100	369	100	..	..
Kinney	50	369	....	..	..
White & Murphy	210	369	210	..	..
Sides	500	500	200	1	..
Best & Belcher	222	469	222	..	..
Gould & Curry	921	821	921	2	..
Savage	768	496	768	3	..
Hale & Norcross	400	700	200	2	..
Chollar-Potosi	1434	700	700	2	..
Bullion	*940	*455	430	2	..
Exchequer	400	*540	....	1	..
Alpha	278½	620	278½	1	..
Apple & Bates	*31½	600	31½	..	..
Imperial (Alta)	*118	600	118	1	35
Bacon	45	600	45	..	..
Empire—N.	55	600	55	2	50
Eclipse	30	*595	30	2	50
French	20	*595	20	..	..
Empire—S. mine	20	550	20	..	..
Plato	10	550	10	..	..
Bowers	20	550	20	..	..
Pinte	20	550	20	..	..
Winters & Kirstel	30	585	30	2	18
Consolidat'd 21 ft.	21	585	21	..	..
Rice Ground	13½	550	13½	..	..
Imp'l (H. & L.)	65¾	550	65¾	..	..
Challenge	50	554	50	1	35
Confidence	130	544	130	1	25
Burk & Hamilton	40	544	40	..	..
Yellow Jacket	957	430	....	2	..
Kentuck	90	300	....	..	..
Crown Point	540	301	540	1	..
Belcher	940	520	940	1	..
Segreg'd Belcher	160	500	160	2	..
Overman	1200	640	1200	4	..
N. American	2000	300	....	1	..
Balt. American	2000	300	500	1	..
Totals	22,264			44	

Deduct 6 feet in dispute between the Imperial and Apple & Bates Companies, and it leaves a total of 22,258 feet.

The above claims contain 22,258 feet, and deducting 700 feet for the north part of Utah and 2,100 feet for the south part of the Baltimore American, unexplored, there will be left 19,458 feet, or a little more than 3¾ miles, as the extent to which the Comstock lode has been partially explored. The table exhibits the fact that from a point 400 feet north of the American mine to the south end of the Utah claim, a distance of nearly one mile, about four-fifth of the distance (3,980 feet out of 5,084 feet) is entirely unexplored, and the owners are as ignorant to-day of the value of their claims as they were when the locations were made. The same remark would be partially applicable to the lode south of the Overman works. The "dead work" (*i. e.*, shafts, wings, tunnels and excavations, not pay ore,) of the Gould & Curry Company equals about 12,750 lineal feet (about 2 41-100th miles,) with an average cross sectional area of thirty feet, or about 14,167 cubic yards. The companies enumerated above have excavated about 28 miles of tunnels and drifts, and about 5¾ miles of shafts, wings and inclines, exclusive of stopes on ore chimneys, which will amount at least to as much more, giving a total of at least 67½ miles. The longest tunnel penetrating the Comstock lode is the Latrobe, 3,200 feet in length, in a straight line, besides various branches, which was commenced in February, 1861, and is still being driven ahead. The above mentioned companies have 44 hoisting and pumping engines, which will probably average between 30 and 40-horse power, and give an aggregate of more than 1,500-horse power. The mines of the the Comstock employ 76 mills for reducing their ores, with an aggregate capacity of crushing 1,800 tons daily, some of which are 14 miles from the mines, the ore being transported on wagons. There is consumed annually by these companies about 22,265 cords of wood, at a cost not far from $16 per cord, and a total cost of more than one-third of a million of dollars, and they use about 15,504,120 feet, board measure, of timber and lumber, all of which must be transported long distances on wagons, at a cost of about $40 per M., or a total cost of nearly two-thirds of a million of dollars. For wood and timber we have a total annual cost of one million of dollars.—*Cor. Alta Cal.*

* Evidently erroneous and much too large.

Composition of Alloys.

Lead.	Tin.	Bismuth.	Point of Fusion.	Point of Solidification.
120 parts.	140 parts.	120 parts.	130° C.	112° C.
145 "	145 "	100 "	140	129
150 "	150 "	75 "	150	135
150 "	150 "	50 "	160	150
170 "	180 "	35 "	170	163
210 "	190 "	30 "	180	165
140 "	155 "	30 "	190	180
200 "	185 "	30 "	200	180
200 "	180 "	30 "	210	180
240 "	150 "	30 "	220	180
207 "	194 "	30 "	180	180

It is generally to be remarked that the fusion point of an alloy is not in relation to the proportions of the metals which enter into its composition. The alloy of 150 parts of lead, 150 parts of tin, and 50 parts of bismuth (proportions evidently corresponding to 6 atoms of lead, 12 atoms of tin, and 1 atom of bismuth), is one of those which solidify most regularly—that is to say, that no one of the metals entering into its composition crystallizes separately on cooling, and that the alloy remains perfectly homogeneous.

It may be observed that the point of solidification of the last five alloys on this table is constant at 180°. When these alloys are melted and then all allowed to cool, small crystals form at 220°, 210°, 200°, or 190°, according to their composition, and when the temperature has descended to 180°, the whole mass solidifies. It is noticeable that during the whole time of solidification the temperature remains at 180°, and that the mercury of the thermometer again begins to descend only when every part of the alloy has become solid.

Another alloy remaining very homogeneous, and unvarying in temperature during solidifications, is that composed of 207 parts of lead and 294 parts of tin (2 equivalents lead to 5 equivalents tin). This alloy melts at 180°, and solidifies at precisely the same temperature.

In these two alloys, which have the most useful properties, the different metals are united in atomic proportions, which seem to prove that, to obtain a good alloy, it is necessary to take into consideration the atomic weight of the metals composing it. It is beyond a doubt that such alloys, remaining so homogeneous during solidification, are possessed of valuable properties not belonging to other and less homogeneous alloys. This question is certainly of great interest in the manufacture of printing type, and for similar purposes: and deserves to be thoroughly studied.—*Bulletin de la Société Chimique and Chemical News.*

Copper Smelting on the Pacific.

The necessity of devising some means for reducing the enormous expense in shipping copper ores from points in the interior of this State, and the entire country bordering on the Colorado River, has been apparent to every one who has been engaged in developing this branch of the mineral resources of the Pacific coast for years past, and many thousands of dollars have been spent in vain attempts to master the difficulties in the way of reducing refractory ores by smelting process, so as to save to the miner from one-half to nine-tenths of the freight money, and enable him to work, at a profit, rich mines now lying idle and undeveloped. Recently parties in Mariposa county have succeeded in perfecting a process by which copper ore there has been smelted, and a few days since we published an account of successful experiments in the same line in Colusa county. Several attempts have been made, on a small scale, in this city, to work the rich but very refractory ores from Arizona, within the past two years, but without any practical results until recently. Some months since, William Thompson, Superintendent of the Great Central Mine of Arizona, and others interested in the enterprise, commenced experimenting, with a view of constructing smelting works on the Colorado River in case of success. The result of these investigations was the construction of furnaces at the Pacific Novelty Iron Works, at Oakland Point, under the supervision of Walker, an experienced copper smelter, which were put to a practical test recently. The fuel used was charcoal, and the flux composed of materials everywhere obtainable at a small expense. The first attempt at smelting was a complete success, the copper being run out in condition for shipping as "regulus" with a single melting. The amount obtained from a very bad quality of ore being within a fraction of one per cent. of the assayed value. This experiment, we think, conclusively establishes the fact that such ore can be worked economically and successfully in this country, relieving us from the necessity of shipping it in bulk long distances by land and water to this city and then to Europe, and then paying return freight on the same article after it has been smelted and prepared for commercial purposes.—*S. F. Alta.*

IMPROVED TURBINE WATER-WHEEL.

Natural advantages of situation often allow miners and others to introduce more economical generators of power than the steam engine. The Reynolds Turbine water-wheel possesses qualities which recommend its adoption where water-power is available. The inventor has aimed to produce a turbine of simpler form and cheaper construction than those generally in use. Compared with other turbines, this is found easier to keep in order. It has a free delivery and is not choked by small bodies, and all parts that require attention are accessible without breaking any joint, and the limited extent of friction surface exposed to the water is an advantage, both in economy of power and of cost, to maintain the surfaces clean and smooth. Fig. 1 is an outside view of the case, showing also the top of the wheel, the shaft and the journal-box. Fig. 2 is a view of the other side, with the case broken open to show the wheel. The revolving part, shown in Fig. 2, is a casting in one piece, which requires only a little earth-work to finish it; and the stationary case and its supports are made of a few parts, likewise requiring only a little finish by the lathe. The bottom step on which the cupped end of the shaft turns is of lignum-vitæ, and rests on a pedestal which is adjustable by set-screws. The gate is hung on its centre, and accurately fitted to prevent leakage. The water, as it is constrained by the case to go nearer the centre, acts directly on the partitions; after which it turns and issues from the openings in the top and bottom of the wheel; and in issuing, it re-acts, on the principle common to turbines. These wheels are built and shipped from the works, with case, gate, shaft, step, spout-frame, coupling, etc., complete for use, and can be readily transported to any distance, and very easily, quickly and cheaply set in operation by any millwright or intelligent person. They are rapidly superseding the old-fashioned Overshot and Breast Wheels, being as powerful, as economical in the use of water, and vastly more convenient and durable. They are constructed in the most substantial manner, of iron, or partly or entirely of brass, and are of superior workmanship. None but the strongest and toughest brands of iron are used, and the wheels are cast whole in iron flasks, ingeniously designed for the purpose, so that there can be no parts to work loose or give trouble.

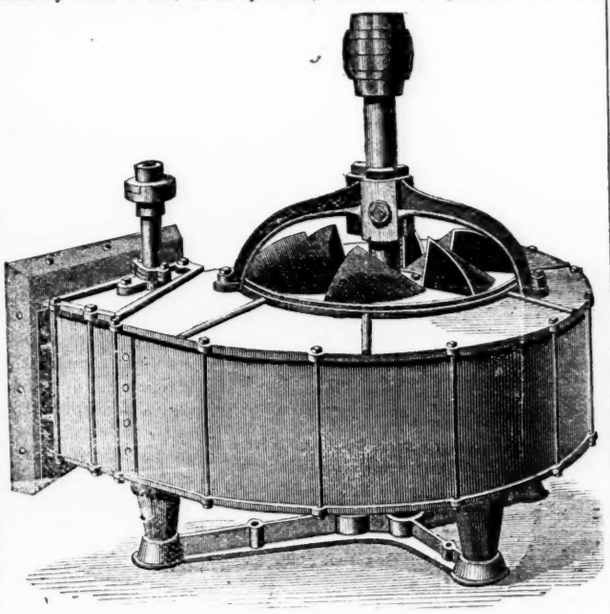


FIGURE 1.

Those ordering wheels or making inquiries hould state particularly the head and fall, the quantity of water they have at command, and the power they desire; or, what is better, the kind and amount of machinery they expect to propel, and the direction the wheel must run. They should also be particular to give their full address, name, post-office county and state.

Address GEO. TALLCOT, 96 Liberty street, New York.

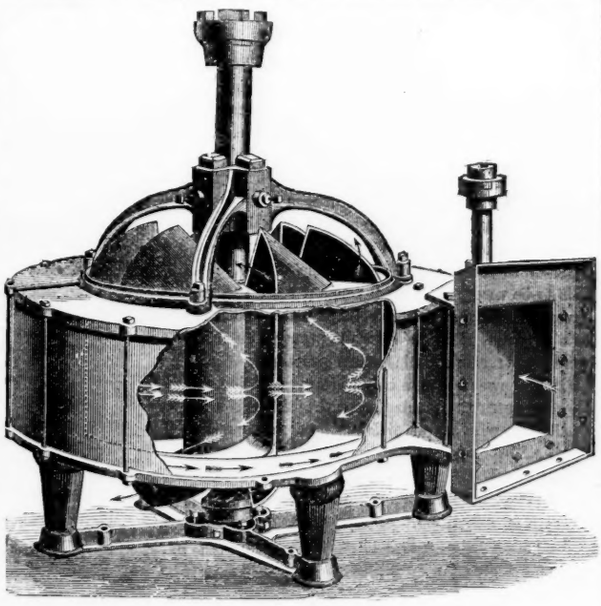


FIGURE 2.

Special Notice.

The attention of our readers in California, and in the West generally, is called to the advertisement of Messrs. Kavanagh & Decker—one of the most extensive and popular Billiard Table Manufacturers in the United States

Improvements in Gold and Silver Amalgamating.

BY THOMAS BETTY.

One of the difficulties met with in the extraction of gold and silver from their matrices by amalgamation is what is known among miners as the sickening and flouring of the mercury used for that purpose. In this state the mercury is tarnished on the surface, its amall gamating action is greatly reduced and when triturated in the amalgamating machines it breaks up into minute particles, which will not again unite, and are carried off with the slimes, so that with many ores the loss of mercury forms a considerable item in the cost of extracting the precious metals. Mr. Crookes, F. R. S., the editor of the *Chemical News*, has, however, recently made a discovery which promises to obviate this difficulty, and prevent this great loss, and which will make his name as well known among the mining public as it has long been in the scientific world for his chemical researches, and especially for his discovery of thallium. It is, that by the simple addition of a small quantity of the metal sodium, the sickening of mercury is entirely prevented, floured mercury immediately brought together again, and the amalgamating action of ordinary mercury vastly increased. It is found that a surprisingly small amount of sodium is sufficient to effect the clearing of fouled mercury. It will require a longer series of experiments than there has yet been time to carry out, to determine the smallest effectual proportion, but it has already been proved that one twenty-thousandth part of sodium, added to the mercury, is amply sufficient, so that this discovery has the great advantage of cheapness to recommend it. Sodium may even now be obtained in large quantities for five shillings per pound, and if a demand were to spring up for it, its price would be greatly reduced; but calculating at the present price of the metal, and using the quantity that experiments have proved to be amply sufficient for any description of ore, the cost is a mere trifle in comparison with the advantages gained. With the ordinary amalgamating troughs in gold mining, one hundred and twenty pounds of mercury are used to each set of four stamps, reducing four tuns of quartz in twelve hours; and supposing the supply of sodium to be renewed every twelve hours, the cost would be less than one penny per tun of quartz treated, which would certainly be more than covered by the loss of mercury prevented, without reference to the greater quantity of gold obtained, in consequence of the improved condition of the mercury.

Mr. Readwin, in a series of experiments at Gwyefind and Castell Carn Dochan Gold Mines, in North Wales, has found that when sodium is added in excess, its effect is injurious instead of beneficial. Some sodium having been placed in my hands for trial, by the discoverer of its new use, I have been able to ascertain its effect upon mercury, and also upon the different minerals usually associated with gold in lodes, and the results obtained throw considerable light upon its action, and seem to account both for its beneficial effect in small, and its prejudicial effect in large, quantities. They can, however, only be considered approximate, and more suggestive than decisive, but they are sufficient to show the great value of the use of sodium in the amalgamation of the precious metals, and indicate its probable action. The experiments were made with mercury containing one per cent. of sodium.

1. When a little of the sodium amalgam was added to ordinary mercury, the affinity of the latter for gold was greatly increased, so that when pieces of gold were dipped into it they were instantly covered with mercury, although when dipped into mercury to which no sodium had been added, amalgamation was very slow and difficult to obtain.

2. Floured mercury immediately ran together into a single globule on the addition of a little sodium amalgam.

3. When the iron pyrites (bisulphuret of iron), magnetic iron pyrites (sulphuret of iron), or copper pyrites (sulphuret of copper and iron), were triturated with sodium amalgam, the pyrites were decomposed, and on the addition of water, a black precipitate of sulphuret of iron was obtained.

4. Triturated with sodium amalgam: *a*. Arsenical pyrites were decomposed and arsenic amalgam formed; *b*. Galena (sulphuret of lead) was decomposed, and lead amalgam formed; *c*. Blende (sulphuret of zinc) was decomposed, and zinc amalgam formed; *d*. Litharge (oxide of lead) and white lead (carbonate of lead) were decomposed, and lead amalgam formed.

From these experiments it appears that sodium amalgam has an energetic action upon both the oxides and sulphurets, reducing both; and as the sickening and flouring of mercury is supposed to be due to the formation of the protoxide and the sulphuret of mercury, its beneficial effect appears to lie in the reduction of these; but if added in excess, it will, after effecting this operation, attack the ores of the baser metals, and with many of them form amalgams. The mercury then becomes loaded with the baser metals, and its action upon silver an gold is greatly reduced. When arsenical pyrites are contained in the ore treated, the arsenic amalgam formed by the action of the excess of sodium floats on the surface of the mercury, and prevents the gold from coming in contact with it. It is thus seen that only sufficient sodium should be added to reduce any mineralized mercury, and to keep it in an efficient state. The quantity added, and the duration of its effect, will vary with different kinds of ore treated, as it is well known that some minerals sicken and flour the mercury much more quickly than others. The whole question of the fouling of mercury when used for amalgamation requires a much more careful chemical examination than it has yet received, and it is a matter of great importance to miners that the attention of so able a chemist as Mr. Crookes has been directed to the subject. Already a discovery of unquestionably great value has been made, which will soon be taken advantage of wherever gold is extracted from its matrix, and we can only hope that the discoverer will participate largely in the profits which will be realized by the use of his discovery.—*London Mining Journal.*

☞ **The Paris Universal Exhibition of 1867 will** offer to the public, among other curiosities, an aquarium which will be thirty metres long by twenty metres in height. It is intended to bring together as complete a collection as possible of the most curious specimens of the submarine world. The size of the aquarium will cause spectators to fancy that they are under water. On looking upwards, the rare opportunity of seeing sharks, tunny fish, cod, and porpoises disporting themselves in their own element, will be given.

AMERICAN
Journal of Mining.

[ILLUSTRATED.]

GEORGE FRANCIS DAWSON,
EDITOR.

By publishing contributions, the JOURNAL OF MINING *does not necessarily endorse the positions assumed by contributors.*

OFFICE, 37 PARK ROW, NEW YORK.

Published Every Saturday Noon.

TERMS:

SUBSCRIPTION.		ADVERTISING.	
Per annum, one copy -	$4 00	One line [Nonp.] 1 inser'n.	$ 30
Six months, one copy -	2 25	One Square, 10 lines, one do	2 00
Three months, one copy -	1 25	One Square, do. four do.	5 00
Single copy - -	10	One Square, do. one year,	40 00

Canadian subscribers 25 cents extra for postage.

☞ Specimen copies sent free.

☞ Liberal reductions to permanent advertisers.

DESIGNING, LITHOGRAPHING, WOOD ENGRAVING, and JOB PRINTING Executed in elegant style, on reasonable terms.

Address **WESTERN & COMPANY, Proprietors,**
No. 37 Park Row, and No. 145 Nassau Street, New York City.

AGENTS,
AUTHORIZED TO RECEIVE SUBSCRIPTIONS AND ADVERTISEMENTS.

THE CANADAS—JOHN MUIR, No. 3 Bluery street, Montreal.
PENNSYLVANIA—S. F. COHEN, Philadelphia.
COLORADO—GEO. TRITCH, Denver City.
" W. S. STANLEY, JR., P.M. Mill City, Clear Creek Co.
" R. G. KELLETT, Central City.

☞ The AMERICAN NEWS COMPANY is authorized to receive orders from city and country dealers for the JOURNAL OF MINING.

NEW YORK, SATURDAY, APRIL 28.

Contents of this Number.

EDITORIALS.—Nitro-Glycerine Defended—The Overland Route to the Gold Regions; Consolidation of Stage Lines—Colorado—Improved Tunnelling Machine, etc.

"LITTLE GIANT" STEAM ENGINE, and THE REYNOLDS TURBINE WATER-WHEEL, described and illustrated.

MISCELLANEOUS.—Explorations in Palestine—Illustration of West Virginia—The Comstock Silver Mines—Composition of Alloys Copper Smelting on the Pacific—Improvements in Gold and Silver Amalgamating—What is Oxygen?—The Hardening of Iron—The Railroad between Constantinople and Smyrna, etc.

PATENT CLAIMS.—The latest allowed to Inventors of Mining and Milling Machinery, Processes, etc.

MINING SUMMARY.—Latest news from California, Nevada, Pennsylvania, Utah, Washington Territory, Arizona, Montana, Ohio, Indiana, New Granada, Mexico, British Columbia, etc.

OIL SUMMARY—Latest news from Pennsylvania, Ohio, Illinois, Michigan, West Virginia, Canada West, Texas, etc.

NEW MINING COMPANIES.—Capital Stock, No. of Shares, Situation of Mines, etc.

MINING COMPANY REPORTS.

MINING COMPANY MEETINGS.

TABULAR MATTER—Gold Copper and Lead Mining Companies—Names—No. of Shares—Capital Stock—Situation of Mine—Name of Secretary and Place of Business.

MARKET REVIEW.—Finances, Stocks, Metals, Petroleum, etc.

DAILY QUOTATIONS OF MINING AND OIL STOCKS.

CHEMICALS USED IN THE VOLUMETRIC ASSAY—Prices, etc.

ASSAYING IMPLEMENTS.—Prices, etc.

SPECIAL SCIENTIFIC BREVITIES.

NEVADA STOCKS.—Latest advices by Mail and Telegraph.

NEW YORK METAL MARKET.

LONDON METAL MARKET.

SALES OF COPPER AT REDRUTH.

☞ Correspondents, exchanges and others addressing us should be *extremely careful* to write "JOURNAL OF MINING," instead of "MINING JOURNAL," to ensure safe carriage.

For Europe.

At the request of numerous subscribers, we shall in future have an edition of the JOURNAL ready early on Saturday morning for the European mail. The non-arrival of the California steamer renders the summary of mining news for that State meagre this week. The news from the Territories is not quite so full as usual, but in a few days this defect will be remedied.

NITRO-GLYCERINE DEFENDED

Because nitro-glycerine is capable of producing the most disastrous effects, some over-timid people cry out that its use should be forbidden by the Legislature. But in spite of this outcry we believe its enemies will be defeated; that it is capable of being made of the greatest service in industrial operations; and that as its properties become better known, danger of accident may be prevented. In the meantime the greatest precaution should be used in the storage, shipment and employment of this formidable servant. The early uses of gun-cotton and even gunpowder were full of alarming and fatal results, and in the case of the latter, even at the present time—when it is supposed to be so well understood—whole hecatombs of lives are being sacrificed. Scarcely a day passes in the Western Mining regions without its record of from one to half a dozen accidents from ignorance in handling powder—and ignorance is really the cause of fatality in the handling of nitro-glycerine. So with gun-cotton when first introduced. The disasters occasioned by ignorance of its qualities were terrible. Yet it is now manufactured, stored and carried by express, with comparatively slight risk, because the means of keeping it in safe condition are known. Professor Seeley—the largest manufacturer of gun-cotton in the world—exhibited this very lucidly to the Association for the Advancement of Science and Art, at a recent meeting. Said he:

"When I first commenced making gun-cotton, the neighbors, greatly alarmed, ran hither and thither to different authorities, and presently I had a visit from the insurance agent, who entered my office in a somewhat excited state with: 'Sir, is it true that you store gun-cotton here?' 'Yes,' I replied, 'I have gun-cotton here; there are about 80 lbs. in that box.' 'But, sir,' he retorted, 'do you not know that it is against the law?' 'On that point,' said I, 'we may differ; but let me show you that there is no danger.' So I took a newspaper, folded it, lighted it at the gas and advanced to the box, while the agent hastily retreated in an opposite direction. Opening the box I put in the lighted paper. Of course there was no explosion, as I knew the properties of the substance I was manufacturing, and that gun-cotton, when kept wet, will not explode. So with nitro-glycerine; if the whole body of the oil be kept below a certain temperature, it will not explode. If you light the top of a flask containing nitro-glycerine, it will burn away gradually, like naptha. If you let fall a spark into it, no explosion will take place; but put it in a close vessel, on a heated place, even though the oil be covered with water, and so soon as it reaches a temperature of 360° Fahrenheit, it will explode with the greatest violence, because the component parts will unite with such suddenness."

From the Professor's remarks we also learned that the recent explosions were caused by spontaneous combustion. The oil had been so packed that it became overheated, and explosion ensued. In the New York city explosion, the nitro-glycerine was stored in large carboys and packed in saw dust. As to the component parts of glycerine, we learn that they are almost the same as those of sugar: $C_6 H_8 O_6$. When treated with very strong nitric acid, it becomes nitro-glycerine. In chemical language, it is $C_6 H_6 O_6 2 NO_4$; in other words, about 75 per cent. nitric acid and 25 per cent. glycerine oil. The advantages attending its use are, among others, that it can be manufactured very cheaply; ordinarily at 50c. per lb., and in large quantities probably at 25c. per lb. It can be easily transported on account of its occupying so little space in proportion to its weight. It can be poured like water wherever it is needed and can be "tamped" with water. Smaller holes can be used than when blasting with gunpowder, and from the suddenness of its explosion the effect is much more decisive. It was asked at the meeting whether the nitric acid and the glycerine could not be combined at the mines, or other place, where the nitro-glycerine is to be used? To this it was answered: "Not conveniently, because three times more bulk of nitric acid has to be used in the preparation than the nitro-glycerine contains when prepared." This objection, however, refers only to transportation to distant countries. In mines near the Atlantic seaboard there will be no difficulty in conveying the nitric acid separate from the glycerine. It is stated that in Sweden, Germany and elsewhere, nitro-glycerine has already superseded other mining explosives. How silly, then, to imagine that unenlightened popular clamor will banish it from this progressive country.

THE OVERLAND ROUTE TO THE GOLD REGIONS.—CONSOLIDATION OF STAGE LINES.

The Butterfield Overland Dispatch Company and Mr. Ben. Holliday's Mail Stage Line have consolidated under the title of the Holliday Overland Mail and Express Company. The stock is held by a large number of the most solid business men in this city, Boston, Chicago, St. Louis and other cities, and the line is being reorganized, and with additional and improved rolling-stock, coaches, etc., will offer accommodations equal to any stage lines in the States. The travel to the Gold Regions is already more than two daily stages can convey, and as the season advances it is anticipated that there will be a great increase of passengers, as the interest in the Mining business has been constantly excited by the improvements in extracting the precious metals. The consolidated company intend to run stages by both the Smoky Hill and Platte Run routes, thus connecting with the St. Louis Pacific Railroad Company at Topeka, and with the Northern system of railroad at Atchinson and Omaha.

These lines will unite at Denver, Colorado, and after throwing out branches to New Mexico, and to Central City, and other points in the mountains, will go on to Salt Lake City, and there connect with lines to California and Arizona, thence onward to Montana, Idaho, Washington and Oregon. The possession of mail contracts to all these points guarantees them protection by Government escort against Indians or other robbers, and the large number of troops now in the Territories will probably make the traveller as safe as he would be east of the Missouri. With such facilities for travel—good roads, comfortable four-horse coaches and way stations every ten miles—there is no reason why pleasure seekers should not turn their attention to these scenes instead of to those so familiar to the European tourist. Here is something new, and on a scale of grandeur to be found nowhere else with half the ease. Illimitable plains—the feeding grounds of the buffalo, antelope and wild horse—mighty mountains, whose peaks look down upon the clouds—huge inland lakes without visible outlets, and a chance to see the red-man in his native wilds before civilization has reached him—surely these are strong inducements, independent of the opportunity for doing a little business in mining matters.

COLORADO.

On Wednesday last the United States Senate passed the bill for the admission of this Territory to State-hood, and in all probability it will pass the House. The Mining interest requires more strength in Congress, and for that reason alone we shall hail its admission with satisfaction. When Senators speak of the decrease in population, they probably forget to give credit for the 3,000 men she contributed to the Union army. Add to this, all the difficulties incident to a war, waged by the remorseless Cheyennes and Arrapahoes; and the wonder is, not that her people have lost so much, but rather that they have anything left at all. Like a bulwark, she stopped the advancing hosts of the Texan Rangers in 1861 and saved the Territories to the Union; held at bay, for years, the hostile savages of the plains; and has contributed largely to the National Revenue. This is neither the time nor place to write her history. It probably has been written well and often enough in the numerous prospectuses of mining companies. She is rich in minerals and metals and ranges of pasturage - where "cattle on a thousand hills" may feed for ages yet to come—and will be the first gold-producing region touched by the Pacific Railroad. Her scenery is grand and climate beautiful Mining operations within her borders have been subject to the same "ups and downs" as in every other mining country. Some are successful, others not. Development—steady persevering work—is what is most needed. There is everything to hope for in her mining future. The Indians are said to be tranquilized; provisions will probably be cheap; the crops abundant; labor easily obtained at fair prices; while the several modes of saving gold are continually improving.

IMPROVED TUNNELLING MACHINE.

From the synopsis of an original paper read by Mr. R. Morton, before the Cleveland Institution of Civil Engineers, we learn that he has invented a

machine—to be used in the proposed tunnel between Newport and Middlesborough, under the Tees—for tunnelling through soft earths. It consists of a tube—the size of the tunnel—formed of circular or elliptical rings of cast-iron, (put together in segments), in front of which a large wrought-iron wedged-shaped shield is pushed by a hydraulic pressure. This shield is made at the back of a similar section to the tube, but 3 feet or 4 feet larger diameter. In this annular space an ingenious arrangement of india-rubber tubes and glands forms a perfectly water-tight joint, at the same time leaving the shield capable of sliding forward. The pointed shield having been thrust forward a few feet, another ring of segments is added to the tube inside the shield, and the work proceeds as before. This machine seems to be a great improvement over those heretofore used in drifting through soft material, but it has many points in common with appliances that have for very many years been used in various countries for sub-aqueous work or such as contain quicksand, etc. Hence, while Mr. Morton is entitled to due credit for much, we imagine he hardly can have claimed it for all comprehended in his plan.

MINING COMPANY REPORTS.

FLINT STEEL RIVER MINING COMPANY.

The amount of Mineral produced during the past year, ending March 1st, 1866, is shown by the statement to have been 162 tons, 954 lbs., of which 152 tons, 455 lbs. was shipped to the Detroit Smelting Works, where it yielded (after deducting a mass lost in transportation) 201,115 lbs., or 100 tons. 1,115 lbs. of ingot copper, or an average per centage of 66 84-100. The amount of Stamp Rock raised was 7,500 tons.

GOLD ROCK MINING COMPANY, OF COLORADO.

From the first annual report of this Company we extract the following: The expenditures of the Company, for the year ending February 1, 1866, are as follows, to wit:

Machinery account,	$ 9,483 93
Transportation account,	15,379 04
Construction account,	7,851 27
Merchandize account (quicksilver, etc.),	377 20
Expense account, at the mines,	1,370 50
Expense account, at the office,	1,552 44
Total,	$36,014 38

The managing agent reports that a shaft has been sunk on the Mammoth lode to the depth of 35 feet, and at this depth it shows a very wide crevice of iron pyrites. On the Pendleton lode (of which the Company own 1,000 feet) a shaft is down 40 feet, with a crevice of over 6 feet, discovering valuable ores. The Grant lode has a shaft commenced. The contiguous claims belonging to the Company, 15,250 feet, remain untouched.

NORWICH MINING COMPANY.

The report of the agent shows the expenditures at the mine, during the year ending January 31st, to be $41,412 25, and the production of copper during the same period, 91,952 lbs., or 45 tons, 1,952 lbs. Besides this, there is on hand 550 tons of stamp rock, equal to 13¾ tons copper (estimated at 2½ per cent.), in all nearly 60 tons for the year. The number of miners employed average 31 per month, at a cost of $56 26 per man. The inventory shows

Supplies on hand, amounting to	$14,802 36
Buildings, machinery, etc., valued at	26 350 00
In all	$41.152 36

As the works of the Company are in thorough repair now, and a large amount of ground opened for stoping, the prospects of the Company for the present year are very good, particularly as the unproductive work of reaching the Indian Digging vein is about completed, after which a largely increased production of copper may be expected from the product of the mine.

CENTRAL MINING COMPANY.

According to the directors' report for the year 1865, the production of copper was 802 tons, 778 lbs., against 502 tons, 877 lbs. for 1864. The amount of mineral shipped was 1,470,199 lbs., of which 42,540 lbs. was lost on board steamer *Pewabic*, but insured for its value. The total amount of mineral delivered at Detroit was 1,427,659 lbs., yielding 1,099,242 lbs. ingot copper, being an average yield of 77 per cent., against 77 55-100 per cent. for the previous year. The sales of copper have been 1,098,223 lbs., at an average price of 32 78-100 cents per lb., the highest price obtained being 40 cents., and the lowest 28 cents per pound. The gross receipts for the year have been:

From sales of copper,	$368,587 28
From interest account,	1,769 80
From other sources,	196 17
Total,	$370,544 25

EXPENDITURE.

General expenditure, as per balance sheet,	$340,389 78
Indebtedness at mine diminished in 1865,	14,087 76
	$326,302 02
Deduct amount expended for buildings and addition to plant of mine,	3,724 49
Making the net cost for the year,	$322,577 53
And showing a profit for 1865 of,	$47,966 72

The amount invested during the year in permanent improvements, was, for

Dock and Warehouse at Eagle Harbor,	$ 5,712 07
Buildings, etc., at mine,	3,724 49
Real estate,	3,049 97
Making a total of	$ 12,486 53
Which being deducted from the gross profits for the year as above, leaves as available profits the sum of	$ 35,480 19
Add surplus of 1864, after paying dividend No. 2,	66,847 22
Net available surplus Dec. 31, 1865,	$102,327 41

Out of which a dividend of $2 50 per share ($50,000) was declared payable January 16, 1866.

QUICKSILVER MINING COMPANY.

The report produced at the meeting of the Company, on 28th Feb., states that the quantity of ore mined during the past year has been 31,948,400 lbs.; the produce, 3,610,341 lbs.; the general average, 12 43-100 per cent., a lower average than during any previous year. Later advices, however, show a favorable change in the character of the ore—that the railroad from the mines to the furnaces has been completed, and will materially lessen the cost of production, which is now about $800,000 per annum, or less, in proportion, than that of any other quicksilver mine in the world—that the earthquake in October last caused damage to the extent of $25,000, and reduced the production of quicksilver for that month. The prospects of the company were considered to be very favorable.

BRADSHAW GOLD & SILVER MINING COMPANY, OF ARIZONA.

From the report of the general superintendent it appears that there are at the mines 50,000 tons of ore, ready for reducing, which will average more than $100 to the ton, $60 more than the Comstock lode yields—that the road from the mines is level, with wood, water and grass in abundance. The distance to the town of La Pay is 180 miles, and thence there is communication via the Colorado river, upon which steamers ply constantly. The neighborhood of the mines is well adapted for agriculture. The superintendent proposes to put a 48 stamp mill the first year, which he estimates will yield a profit of 50 per cent.—a 96 stamp mill the second year, which is to realize 150 per cent., and the funds needful to put up a 400 stamp mill, the running of which will give 1,000 per cent., and which latter mill will require only 300 men to work it. He states that in the Bradshaw district alone the Company has 40,800 feet of mines, the whole available and sufficient to employ 20,000 operatives.

NEW MINING COMPANIES.

GOLDEN GATE MINING COMPANY OF MONTANA.—ORGANIZED UNDER THE LAWS OF THE STATE OF NEW YORK. CAPITAL STOCK $600,000; 60,000 SHARES OF $10 EACH.

John R. Weeks, President; Joseph Morse, Jr., Secretary and Treasurer. Office, 117 Broadway, New York.

UPPER MISSOURI MINING AND PROSPECTING COMPANY.—CAPITAL STOCK $100,000; 1,000 SHARES OF $100 EACH.

This company, a prospectus states, was formed for the purpose of procuring mines, lodes, or leads of gold, silver, iron, lead, coal or other minerals, in the Territory of Montana, and for the development and working of the same, and disposal of products. Office, 117 Broadway, New York.

SPRUCE HILL COAL COMPANY OF ALLEGANY COUNTY, MARYLAND.

The property of this company, says a prospectus, consists of more than 800 acres of valuable coal lands, situated in the great Coal Basin lying between the towns of Cumberland and Frostburg, and contains what is known as the Big or Fourteen Foot Vein. Charles H. Hamill, President, New York.

DELEVY GOLD MINING CO., OF CANADA.—CHARTERED BY ROYAL LETTERS PATENT. CAPITAL STOCK $10,000,000; GUARANTEED STOCK $500,000; SHARES $100.

The statement of this company says, the property is located in, and consists of all the minerals embraced in the Seigniory of Rigaud-Vandreuil, containing one hundred and eight square miles, or nearly seventy thousand acres. The company's right consists in a lease for thirty years from September, 1864, with a privilege of renewal for thirty years additional. Chauncey Vibbard, President; J. M. Winchell, Secretary and Treasurer. Offices, Nos. 72 and 74 Cedar street, New York, and No. 3 Port Dauphin street, Quebec, Canada.

BRADSHAW GOLD AMD SILVER MINING COMPANY OF ARIZONA.—INCORPORATED UNDER THE LAWS OF THE STATE OF NEW YORK. CAPITAL STOCK $1,000,000; 250,000 SHARES OF $4 EACH. FIRST WORKING CAPITAL $200,000.

The property of this company, according to a prospectus, is located in the Bradshaw Mining District, Yavapia county, Arizona; Ingo Mining District, California; Owen River, and in the Indian Springs Mining District. Hon. Green Adams, President; O. H. P. Conover, Secretary and Treasurer. Offices, No. 110 Broadway, New York, and No. 219 Dock street, Philadelphia.

INCAS SILVER MINING COMPANY.—MINES IN SUMMIT AND GILPIN COUNTIES, COLORADO. SHARES 300,000; CAPITAL $300,000. Secretary, J. P. Whitney, 19 Lindall street, Boston.

MINING COMPANY'S MEETINGS.

THE HARMONY GOLD AND SILVER MINING COMPANY hold their annual meeting at the office of Demas Barnes, 21 Park Row, N. Y., to-day, April 28, 1866, at 12 o'clock M., for the election of Trustees, &c.

THE COPPER CREEK MINING COMPANY will hold their annual meeting at the office of the Company, 71 Broadway, N. Y., on May 7, 1866, at 12 o'clock M., for the election of Trustees.

THE DELAWARE AND HUDSON CANAL COMPANY will hold the annual election for Managers at the office of the Company, 7 Nassau street, N. Y., on May 8, 1866, between the hours of 12 and 2 P. M.

THE CONTINENTAL MINING COMPANY will hold their annual meeting for the election of Trustees at the office of the Company, 115 Liberty street, N. Y., on May 2, 1866, between the hours of 12 and 2 P. M.

THE STEPHENSON SILVER MINING COMPANY OF ARIZONA will hold a meeting for the election of Trustees, etc., at room No. 6, 22 Pine street, N. Y., on May 31, 1866, at 1 P.M.

THE McNEAL COAL AND IRON COMPANY will hold their adjourned meeting of the Stockholders, for the election of officers, etc., at the office of the Company, 66 South street, N. Y., on May 1st next.

PRICES OF ASSAYING IMPLEMENTS.

[CORRECTED WEEKLY.]

Smelting Furnaces	$35 00@ 40 00
Cupelling "	35 00@ 40 00
Scales	10 00@ 30 00
Assay Balances and Weights	100 00@200 00
Plumbago Crucibles	25@ 1 50
Paris "	15@ 1 25
Porcelain Evaporating Dishes	25@ 5 00
Fire Tongs	75@ 3 50
Hammers	1 00@ 2 50
Funnels	15@ 1 00
Litmus Paper, quire	1 00@ 1 25
Ingot Moulds	1 25@ 3 00
Flasks, Bohemian Glass	15@ 1 00
Sand Baths, Iron	25@ 1 00
Plyers	50@ 2 00
Mortar and Pestle, Iron, Agath, etc	50@ 20 00
Lamps, Gas and Alcohol	75@ 5 00
Blowpipes	50@ 3 00
Hydro-Oxygen Blowpipes	25 00@125 00
Pincers, or Cutting Plyers	75@ 1 50
Glass Tubes, German, Bohemian, etc., per lb	75@ 1 50
Muffler	50@ 1 50
Anvils	1 00@ 2 00
Cupel Moulds	3 50@ 5 00
Cupels, per doz	50@ 3 50
Bone Ash, per lb	25@ 50
Test Lead, "	50@ 75

WHAT IS SAID OF THE "JOURNAL OF MINING" BY THE PRESS.

From the N. Y. Evening Post, April 4, 1866.

Messrs. Western & Co., 37 Park Row, have begun the publication of the AMERICAN JOURNAL OF MINING. It is a handsomely printed newspaper of sixteen pages, and the first number is filled with valuable articles. Mr. George F. Dawson, the editor, is an experienced journalist, and a man of great industry and activity in the origination and diffusion of knowledge. We believe there is room for a Mining Journal of a higher scope than we have had, and the present sheet looks as though it would meet the public want.

A casual remark in an article on drilling by compressed air shows that our countrymen do not always succeed in keeping themselves first among the foremost, even in the introduction of mechanical improvements:

"By the introduction of compressed air these outlays can be almost entirely avoided, now that we have a power at hand available as steam for doing our mining work, at points where steam cannot be used. We must seek out and set to work the best machinery for drilling the rock and cutting the coal. More than three years of steady work at the Mount Cenis tunnel, and almost as long in English mines, demonstrates the fact that there are machines to be had which will do good work, and have them we must; if our own countrymen cannot furnish them we must import them or be behind the age. Is it not remarkable that in the department of mining and drilling rocks, few, if any, improvements have been made, while in almost all other branches of industry the advance has been marked and regular?"

From the N. Y. Express April 3, 1866.

STATE OF MINING.

The AMERICAN JOURNAL OF MINING, a new paper just published, and a *very acceptable one*, we should think, *to the mining interests of the country*, says, though the season is dull:

"The gold and silver mines of Nevada, Montana, Idaho, Colorado, Arizona, Oregon, New Mexico, never yielded larger returns. Those of California manifested decided symptoms of improvement. The copper product of the great copper region bordering Lake Superior exhibits no decrease; and the coal, iron and lead mines of Pennsylvania, Wisconsin, Illinois, and other States, certainly hold their own. Most encouraging accounts as to the mineral wealth of Virginia, Georgia, and others of our Southern States also continue to come in.

"The petroleum product, in spite of the heavy tax imposed upon 'crude,' is growing, and when Congress shall have lifted the galling burden from the producers' shoulders, it must become a highly remunerative branch of mineral industry. The excitement relative to Montana and Idaho does not seem to have been materially affected by the glowing accounts from New Granada; and the more recent reports from the Big Bend mines, in British Columbia, although bearing the imprint of truth, serve but to increase the bent of many adventurous minds to swell the populations of those two favored Territories, as by travelling via San Francisco and Portland, to either Montana or Idaho, they might visit Big Bend without diverging much from their line of travel."

Of the speculative feeling so common and involving heavy losses, it is said, and *well truly*, we think, that:

"Mining can never, as a rule, be profitably conducted, unless as a legitimate business. But as a business it can, without a doubt, be carried on most remuneratively."

From the Messager Franco-Americain, April 4, 1865.

[TRANSLATION.]

We have received the first numbers of a scientific journal which has just been established in New York, called the AMERICAN JOURNAL OF MINING. The new publication concerns itself with the mines of every kind which enrich the soil of America, from the gold mines of California and of Colorado to the mines of petroleum and coal of Pennsylvania. The discription of the different methods of mining, and of the machinery invented by modern genius, are accompanied by wood cuts drawn with care.

The text is clear and legible to every one. In fine, as far as may be judged by a first and necessarily very rapid examination, the JOURNAL OF MINING is destined to be of great utility, not only to engineers but to persons of all conditions who, having an interest in mining, wish to get a *compte rainsne* of the chances of gain or loss offered by the different speculations.

From the Mining Journal, Pottsville, Pa.

AMERICAN JOURNAL OF MINING.—This is the title of a neat and interesting sixteen page weekly paper, edited by George Francis Dawson, Esq., and published at 37 Park Row, New York, by Western & Co. It is devoted to general mining matters, and will, we judge from the contents of the first number, pay much attention to gold and silver mining in the West, now attracting investment and immigration. It is a paper that bears upon it every indication of capacity to command success, which we heartily hope it will secure. The subscription price is four dollars a year.

From the N. Y. Atlas, April 14, 1865.

AMERICAN JOURNAL OF MINING.—We have received the first two numbers of a new weekly bearing this title, which promises to supply a much-felt want. The rapid development of the mineral resources of this country that has recently taken place, and the great pecuniary interests thus called into existence, have created a necessity for a reliable journal of the kind, to disseminate mining news, and serve as a medium of communication for all concerned in the mining business. This publication is under the editorial charge of George Francis Dawson, and is issued in unexceptionable style, typographically.

From the Chicago Evening Journal, April 7, 1866.

A NEW MINING JOURNAL.—We have received from the publishers, Messrs. Western & Co., 37 Park Row, New York city, the initial number of the *American Journal of Mining*. It is a handsomely printed weekly of sixteen pages, and is filled with valuable articles. Mr. George F. Dawson, the editor, is an experienced journalist, and a man of great industry and activity in the origination and diffusion of knowledge. We believe there is room for a mining journal of a higher scope than we have had, and the present sheet looks as though it would meet the public want. The subsbription price is $4 per annum.

From the Scientific American.

AMERICAN JOURNAL OF MINING.—This is a neat, well-printed journal, lately started, and devoted, as its title indicates, to mining and kindred matters. It is illustrated and contains full reports of the condition and prospects of the mines in Colorado, California, and other territories. It is published by Western & Co., 37 Park Row, at $4 a year.

From the Reno Times, April 5, 1865.

JOURNAL OF MINING.—The first number of a weekly journal to be devoted to mining interests, has been issued by Western & Co., New York, under the able editorial charge of George Francis Dawson. It contains sixteen pages, published in handsome style, and we hope will meet with abundant success.

From the New Yorker Staats-Zeitung.

[TRANSLATED.]

The first number of the *American Journal of Mining*, edited by Mr. George F. Dawson, is before us and we welcome it. We think the *Journal* has made its appearance just in the right time.

Special Scientific Brevities.

☞ M. Schlœsing has just succeeded in discovering an arrangement by which an intense heat, sufficient to melt iron, can be got from ordinary gas. The principle of his contrivance is the complete combustion of the proportionate amounts of gas and air within a confined space, and the continuous supply of the combustible materials. A copper tube, carefully pierced, is the chief instrument in securing these results. M. Schlœsing was able to melt a piece of iron weighing 400 gms., in twenty minutes, by his plan.

☞ Oersted's apparatus for showing the compressibility of water and liquefaction of gasses, effects its objects by a neat and ingenious process. Within a large vertical tube smaller tubes are fitted, containing different gasses, water, and mercury. Pressure is applied by means of an air-pump, and as the mercury rises in the tubes it compresses the gasses, which presently are seen to liquefy. But on removal of the pressure they resume their gaseous condition.

☞ It appears that the common salt occurring in nature in the Andes in process of time undergoes nitrification, being now in company with lime and the nitrogen of the air, by a process not easily explained. The chlorine of the salt going to the lime, forming chloride of calcium, and nitrate of soda being produced.

☞ Electric lights have been definitely established in the two light-houses of the Heve, near Havre. The intensity of each of these new lights is estimated as equivalent to 5,000 carcel lamps, and it may be increased twofold, with little additional cost, whenever the condition of the atmosphere requires it.

☞ The French Government is considering the policy of regulating the trade in petroleum by dividing the oil or its products by distillation into two classes, one inflammable, including those oils the vapor of which will take fire from a match (95 F.), and those which stand a much higher temperature.

☞ In the reign of Darius gold was thirteen times more valuable, weight for weight, than silver. In the time of Plato it was twelve times as valuable. In that of Julius Cæsar, gold was only nine times more valuable, owing perhaps to the enormous quantity of gold seized by him in his wars.

☞ White lead and litharge mixed together in nearly equal proportions with boiled linseed oil, so as to make it of the consistency of putty, forms a good cement for joints of steam pipes. This is also a good cement for dry cisterns, when mixed with about ten per cent. of dry white sand.

☞ One of the strange properties of aluminum bronze is that after being forged it is annealed by precisely the reverse treatment to which iron is subjected, as it is heated to dull redness and then plunged into cold water.

☞ An alloy composed of 3 lbs. of lead, 16 lbs of tin, and 3 lbs. of zinc is capable of being rolled out into plates for making white ware of a superior quality, as a substitute for Britannia metal.

☞ It may not be generally known, says the *Illustrirte Zeitung* that the famous statue of Pompey, at whose feet Julius Cæsar died, is now in the possession of the Marquis of Hertford, whose father paid 126,000 francs for it.

☞ A pearl valued at five thousand dollars was recently shown the editor of the Panama *Star and Herald*, taken from the Pearl Islands in the Bay of Panama.

☞ A company has been organized in Bothwell, Canada, for the manufacture of perfectly tight oil barrels.

Patent Claims.

INTERESTING TO MINERS, MILLMEN, METALLURGISTS, OIL-MEN AND OTHERS.

The following claims have recently been issued from the United States Patent Office:

53,951.—Apparatus for Separating Volatile Metals from Ores.—Joseph C. Coult and John Roach, San Francisco, Cal.:

First, We claim the combination and arrangement of the furnace, b, substantially as described and for the purposes set forth.

Second, We claim the water tank, f f, flue, g, with their supply and cooling pipes, f and g', arranged substantially as described and for the purpose set forth.

Third, We claim the arrangement of the fan, h, for the purpose of drawing the fumes from the furnace upon one side, and taking in cold air on the other side, and forcing the whole, with water, into the condenser, substantially as described and for the purpose set forth.

Fourth, We claim the combination and arrangement of the condensers herein described for the purposes set forth.

53,970.—Barrels and other Vessels.—John A. Frey, John Allen, and Gaston D. Smith, Washington, D. C.:

We claim the construction of a metallic barrel or vessel, made impervious and solid by galvanizing, as herein described, and for the purposes set forth.

53,976.—Concentrator.—Joshua Hendy, San Francisco, Cal.:

First, I claim the curved bottom of the pan having its greatest inclination near the central discharge, and gradually diminishing in inclination as it approaches the periphery of the pan, substantially as described, and for the uses and purposes hereinbefore set forth.

Second, The pan with a regular or graduated curved bottom.

Third, The pan with a bottom so constructed as to have a downward inclination toward the discharge, D, at its periphery, at the same time the rim of the central discharge shall be in a horizontal position, so that the discharge shall be uniform, substantially as described, and for the uses and purposes set forth.

Fourth, The horn-shaped cavity, or trough, C, in combination with oscillating pans or concentrators, as herein described.

Fifth, The horn-shaped trough in combination with pans or concentrators, having curved or convex bottoms.

Sixth, The shaft, S, with screw, m, and crank or nut, p, and step, F, or their equivalents, for the uses and purposes hereinbefore set forth.

Seventh, The oscillatory pan with curved or convex bottom, horn-shaped cavity, C, outlets, X D and E, in combination with the adjustable shaft, S, substantially as described, and for the uses and purposes as hereinbefore set forth.

53,981.—Drilling Machine.—Thomas M. Howard, Charlestown, Pa.:

I claim the combination of the lever, N, lever, P, with its pin, t, spindle, n, with its holes, u, wheel, m, sliding rack, M, and drill spindle, H, the whole being arranged and operating substantially as and for the purpose herein set forth.

53,985.—Slide Valve for Steam.—W. R. Jenkins, Jr., and H. D. Landis, Bellefonte, Pa.:

We claim the combination of the plate, B, and hollow-legged valve, G, arranged relatively with the steam chest, A, chamber, C, and ledges, D, in the manner and for the purpose herein specified.

[This improvement in slide valves consists both in the construction of the valve chest and in the valve, the latter being made of any desirable length without thereby increasing its bearing surfaces, and the cone of the valve chest being a plate made on the top of the cover.]

53,992.—Drill and Crane Attachment.—Isaac S. Lauback, New York City:

I claim, First, In combination with the post and arm of a crane, the vertical and horizontal driving shafts, C E, when fitted with the necessary cog wheels and connection to drive a drill spindle, substantially as set forth.

Second, The moveable bracket, K, in combination with the shaft, C, and the arm of the crane, B, for the purpose of carrying the driving wheels, i J, and the drill spindle, R.

Third, In combination with the arm of the crane, the drill spindle, t, when connected by means of the universal joint, r, for the purpose of drilling holes under said arm, at an oblique angle therewith.

Fourth, In connection with the drill spindle, t, and the crane arm, the lever, z, connected to the arm of the crane, so that the power which presses the drill forward will also tend to draw the beam down, instead of pressing it up, substantially as described.

53,993.—Taking Air off Chill Mold.—G. R. H. Leffler, Baltimore, Md.:

I claim providing the chill molds with a number of small air openings, leading from the interior space to the outside, for the purpose of making vent for the air contained in the space when the molten metal is poured in.

I claim the combination described and represented of the passages, F, and channels, G, substantially as described.

54,006.—Rotary Engine.—William J. Morton, Cincinnati, Ohio:

First, The cut-off, B, in combination with valves, d, reversing rods, g, and rod, h, all arranged and operating as specified for the purpose set forth.

Second, The valve or valves, d, reversing rods, g, and rod, h, constructed anb operating as above described and set forth.

Third, The cylinder, A, and cylinder heads, D ana D', constructed as above specified, and for the purpose set forth.

54,011.—Oil Well Drill.—G. R. Platt, Brooklyn, N. Y.:

I claim, First, Hanging the drill rod to the outer end of the walking beam, operated at its inner end by and through a series of one or more adjustable arms, b', arranged together and operating substantially as herein described.

Second, The combination of the pulleys, h n and p, with the drill rope, l, or its equivalent, arranged together and operating as and for the purpose specified.

Third, The side catch, g', of the drill-rod rope, in combination with the spiral or twisted guide rod or rods, f f', arranged and operating as and for the purpose described.

54,014.—Apparatus for Collecting Floating Oil.—Andrew Ralston, West Middletown, Penn.:

I claim. First, The lifting wheel, with its troughs, as arranged in relation to the descending plate, R, whether curved or vertical, all substantially as shown and described.

Second, The arrangement of the sections, V, and ropes, W W', as described, pulleys, x, ropes, a, pulley, Y, in combination with the rope, U, suitably elevated, and operating in the manner and for the purpose herein described.

[The object of this invention is to collect and save the petroleum which floats down on the surface of streams in the oil regions. It consists in an apparatus for guiding the oil towards a lifting wheel or voria, by whose revolution it is lifted up from the level of the stream and discharged into a receptacle.]

54,028.—Amalgamator.—George B. Simpson, Washington, D. C.:

First, A horizontal cylinder, larger at one end than at the other, in combination with an upright cylinder attached at the smaller end, and a downright hour-glass cylinder attached at the larger end, and in combination with the furnace pump and mercury bath tub.

Second, The horizontal screw-flanged wheel, agitator, stirrer or mixer, in combination with the perpendicular rotating flanged cone and external cylinders.

Third, The amalgamation of gold and other precious metals, by passing a continuous current of finely pulverized ores through the vapor of mercury in an open vessel in combination with the agitators and cylinder.

Fourth, The re-association of the vapor of mercury and the granulated amalgams with the mercury again, by passing them into a bath of cold mercury, which retains them in combination with the cylinders, agitators and the mercury bath-tub or vessel, substantially as hereinbefore described.

54,062.—Amalgamator.—George S. Curtis and Thomas Tripp (assignors to themselves, E G. L. Faxon and Henry S. Dodge), Chicago, Ill.:

We claim the combination of the vertical feed pipe, E, and the horizontal conveyor, B C, with the amalgamating vessel, A, arranged and operating, substantially as and for the purposes shown and described.

In combination with the amalgamator, A, and conveyor, B C, we claim the arrangement of the diaphragm or dispenser, F, substantially in the manner and for the purpose described and shown.

54,064.—Grate for Furnaces, etc.—Robert W. Davis, Flushing, N. Y., and Daniel Davis (assignors to themselves and John H. Livingston), Long Island City, N. Y.:

First, We claim the grate, G, constructed and applied to a boiler or other furnace, or to a stove, substantially as and for the purpose herein set forth.

Second, Supporting the grate of a boiler or other furnace, or of a stove upon a vertical screw, substantially as and for the purpose specified.

54,069.—Drill Stock.—D. Frank Hartford (assignor to himself and Edmund Tarbell), Boston, Mass.:

I claim the combination of the direct and reverse helical grooves, f f' g g', as arranged, with inclined planes, s, at f' g' and h, with the chuck, B, and its pins, b' e e', all constructed and operating substantially as described.

54,073.—Saline Meter Pot.—George Sewell, Poughkeepsie, N. Y., assignor to the American Tool and Machine Company, New York City:

I claim the secondary chamber, C, which is open at the bottom, in combination with the main chamber, B, and induction pipe, a, of a saline meter pot, A, connected and operating, substantially as and for the purpose set forth.

[This invention consists in the arrangement of a secondary chamber in the interior of a salinometer pot in combination with the induction pipe, in such manner that the water issuing from said induction pipe is compelled to pass down and then up into the space containing the hydrometer, and by these means the current of water is broken, and the engineer or person having charge of the salinometer is not exposed to the danger of being scalded by the water flying from the pot.]

54,074.—Amalgamator.—Thomas Tripp (assignor to himself, George S. Curtis, E. G. L. Faxon, and Henry S. Dodge), Chicago, Ill.:

First, I claim the arrangement of a stationary cylinder or tube, B, within a revolving cylinder, E, substantially as and for the purposes specified.

Second, In combination with the above, I claim the employment of one or more tubes, M, arranged substantially as and for the purposes described.

Third, I claim the arrangement of the stationary plate, beneath the discharge pipes, M, for the purpose of preventing a rotating motion of the ores below the tube or cylinder, B, substantially as herein shown.

54,075.—Amalgamator.—Thomas Tripp, and George S. Curtis (assignors to themselves, E. G. S. Faxon, and Henry S. Dodge, Milwaukee, Wis.), Chicago, Ill.:

We claim the combination of the vertical tube, B, with the revolving agitator or disperser, H, arranged and operating, substantially as herein set forth and shown.

54,076.—Amalgamator.—Thomas Tripp, and George S. Curtis (assignors to themselves, E. G. S. Faxon, and Henry S. Dodge, Milwaukee, Wis.), Chicago, Ill.:

First, We claim the hollow shaft, C, provided with the opening, P, and the drum, B, provided with the aperture, O, when the opening, P, and aperture, O, are connected by a tube arranged within said drum, and all are combined and operated, substantially as herein shown and described.

Second, The hammer, H, when operated upon the shaft, C, for the purpose described.

54,078.—Boiler Feeder.—William Bowman, Greenock, Scotland:

First, I claim the combination and arrangement of the specific devices herein set forth, for feeding steam boilers, which continues to operate by the direct action of the steam, as long as the water is below the proper level, but ceases to operate as soon as the water is high enough, substantially as described.

Second, I claim the combination and arrangement of the floats, K and I, operating the valves, C and D, by means of the levers, G and E, substantially as described.

Third, I claim an inductor, in which the upper float, K, rising, opens the induction steam valve, and closes the exhaust valve, and the falling of the bottom float, I, reverses the movement, substantially as herein set forth.

54,079.—Rotary Engine.—Fidele Chatelain, Lille, France:

I claim the arrangement in rotary steam engines, constructed as described, of the two cams, with reference to the sliding pistons and the revolving cylinder, for operation, as herein shown and set forth.

More About Nitro-Glycerine.

A contemporary, having made a mis-statement relative to the deadly compound, that is so largely agitating the scientific world, Professor W. Dussance writes:

"Mr. Nobel is not the inventor of nitro-glycerine, nor of its applications in industry, for last year a block of steel was presented to the Academy of Sciences, of Paris, split in two by nitro-glycerine, and in 1847 I was present at the experiments of Sobrero, being myself a pupil of Pelauze at the time, and after this savan had demonstrated the explosive nature of this dangerous substance, he depended upon us to experiment on it. I could name all the authorities who speak of it, but I will only name one work, published in this country. Mr. Daniel Breed, chemist to the Patent Office in 1853, translated the 'Principles of Organic and Physiological Chemistry.' By Dr. Carl Larvig. (German edition of 1851.) On page 434, in the article 'Glycerine,' he says, 'with nitric acid, glycerine becomes a violently-exploding nitro-compound.' It results from this work, and several other foreign ones, that the only honor left to Mr. Nobel is the destruction of many lives."

GOLD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Acadia			Nova Scotia	H. W. Nelson, 24 City Ex., Boston.
Albion		$ 300.000	Halifax, Nova Scotia	H. W. Nelson, 24 City Ex., Boston.
Alpa	100,000	250.000	Illinois Central Dist., Col.	J. Stanton, Jr., 25 Nassau, N. Y.
Ascot	50,000	5,000,000	Sherbrook, C. E.	G. H. Morrison, 17 Nassau, N. Y.
Atlantic				Chas. Barett, 13 Doane, Boston.
Atl tic & Pacific	50,000	5,000.000	Humboldt T., Humbolnt oo.	J. N. Sewall, 8 Broad, N. Y.
American	100.000	5,000.000	Gregory Dist.	
American Flag	60,000	600.000	Nevada Dist., Col.	H. Foles, 12 Pine, N. Y.
Astor	200,000	1.000,000	On Comstock Lode	J. Chapman, 71 Broadway, N. Y.
Baltic			Colorado.	New York.
Bates & Baxter			Colorado	New York.
Bay State	200,000		Colorado	Lem'l Bangs, Boston.
Benton	100,000	500,000	Colorado	F. W. Capen, 44 Ex. Pl., N. Y.
Black Hawk	50,000	5,000.000	Gilpin co., Col.	D. Littlejohn, 81 John, N. Y.
Beacon		500.000	Halifax co., Nova Scotia	J. B. Post, 20 Ex. Pl., N. Y.
Bobtail	100,000	1.000.000		J. Stanton, Jr., 25 Nassau, N. Y.
Briggs	10,000	1,000,000	Gilpin co., Col.	D. Littlejohn, 81 John, N. Y.
Bradshaw	250,000	1,000.000	Yavapai County, Arizona	O. H. Conover, 219 Dock st., Phil.
Burroughs	100,000	1.000.000		L. Bangs, 22 Pine, N. Y.
Bullion	200,000	1.000.000	Bannock, Montana	55 Liberty, N. Y.
Bullion Consoli.	300,000	300,000	Sammit and Clear Creek., Col.	12 Pine, N. Y.
Calvin	200,000	1,000.000	Clear Creek co., Col.	J. P. Whitney, 19 Lindall, Boston.
Canadian				A. Call, 7 Phœnix B'l'g, Boston.
Chem. Gold&S. R				64 B'way
Ch. Un. Gold Co.				66 B'way
Chebucto	100,000	500.000	12 miles from Halifax	J. E. M. Gilley, Boston.
Clarendon		500.000	5 miles from Halifax	H. Doane, 41 State, Boston.
Chase	5,000	500,000	Colorado	W. E. Lawton, 81 John, N. Y.
Central Gold M.	20.000	1,000.000	Central City, Col.	L. Bangs, 22 Pine, N. Y.
Central Mining	200,000	1,000.000	Colorado	46 Exchange Pl., N. Y.
Chandiere	100,000	500.000	5.000 A Famine Riv, C. E.	Wm. B. Fowle, Boston.
Cobden	100.000	1,000,000	Idaho	New York.
Colonial				W. N. Ely, 7 Trav'r B'l'g, Boston.
Colorado Boston			Colorado	R. C. M'Laughlin, 60 State, Bos'n.
Colorado N. Y.			Colorado	12 Pine, N. Y.
Coleman			Colorado	New York.
Columbia	30.000	3,000.000	Austin City, Nevada	10 Pine, N. Y.
Consuelo Gold				31 Pine,
Consol Gregory	50.000	5.000.000	Gregory Dist., Col.	39 Pine, N. Y.
Cook & Kimball	1,000	150.000	Colorado	W. W. Baldwin, 35 Wm., N. Y.
Copalinshee	250.000	5.000.000	Parke co., Col.	J. C. Stocker, 137 B'way, N. Y.
Corrisannee	100,000	1,000,000	Colorado.	New York.
Commonwealth			Nevada.	Philadelphia.
Corrydonn	100,000	2,500,000	Gilpin co., Col.	46 Exchange Pl., N. Y.
Continental	20,000	2,000.000	Gregory Dist., Col	115 Liberty, N. Y.
Central Gold	200.000	1.000,000		L. Bangs, 22 Pine, N. Y.
Dauphin & Colo.	200,000	1.000.000	Colorado.	John S. McMullin, 423 Walnut, Pa.
Day & Bushnell	300.000	3.000,000	Colorado	T. Chalmers, Jr., 20 Ex. Pl., N. Y.
De Lery		10,000,000	Chandiere Valley, Canada E.	J. M. Winchell, 72 Cedar, N. Y.
Denver	50,000	1.000.000	Gilpin & Clear Creek, Col.	J. Wadsworth, 61 Cedar, N. Y.
Devonshire				W. Stockbridge, 74 Fr'klin, Bos'n.
Downieville	300,000	300.000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Dorset			Chandiere River, C. E.	F. McJimsey, 59 Wm., N. Y.
Eagle	100,000	1.000.000	Gold Dirt Dist., Col	J. P. Davies, 81 John, N. Y.
East Bannack	100,000	200.000	Bannack City, Montana	J. Callender, 48 Ex. Pl., N. Y.
Eldorado	500,000	2,500.000	San A Dist., 9 miles of Austin	208 S. Fourth, Phila.
Empire	250,000	5,000.000	Clear Creek, Col	H. K. Gates, 191 B'way, N. Y.
Empire Mill & M				O. F. Griffin, San Francisco.
Enriquetta			Arizona	New York.
Esperanza		500.000	Star D., Humboldt co.	117 Broadway, N. Y.
Pina	50,000	500.000	Nevada Dist., Col.	C. W. Bryant, Boston.
Excelsior	30,000	300.000	Central City, Col.	J. Weatherbee, Jr., 11 P. B'g, Bos.
Famine Falls	100,000	1.000.000		D. L. Dodge, 30 B'way, N. Y.
Garrisons	100,000	5.000.000	Colorado	C. G. Mease, 29 William, N. Y.
Gem	25,000	1,200,000		H. K. Gates, 191 B'way, N. Y.
Georgetown			Colorado	New York.
Gilbert River				C. E. Jackson, 18 Phe'x B'g, Bos'n.
Gilpin				C. W. Galloupe, 76 State, Boston.
Golconda	250,000	5.000.000		J. H. Sherman, 19 Broad, N. Y.
Gold Field				C. B. Cowling, 39 Kilby, Boston.
Gold Rock	5,000	500.000	Central City, Colorado	R. M. Lockwood, 113 Wall, N. Y.
Gold River				W. H. Cheesman, 9 Central, Bos'n.
Gold Hill	50,000	500.000	Colorado	W. T. Eustis, Boston.
Gold Mountain	600,000	6,000.000	Clear Creek Co., Colorado	25 Nassau, New York.
Gold Min'g of Col	50.000	5,000.000	Colorado	E. Latham, 23 William, N. Y.
Golden Gate	60,000	600,000	Sum., High'd&Mill C. D., Mon	J. Morse, Jr., New York.
Gunnel Central			Colorado	70 Broadway, N. Y.
Gunnel Gold	300.000	3.000.000	Colorado	F. E. Roelfson, 78 & 80 B'way, N.Y.
Gregory	20.000	1.000.000	Colorado	Thos. Wildes, 17 William, N. Y.
Granada	50,000	125.000	Colorado	J. Stanton, Jr., 25 Nassau, N. Y.
Great Western	60.000	600.000	Russel Dist., Col.	E. Kemeys, 70 Broadway, N. Y.
Gunnel Gold	100,000	1.000.000	Colorado	F. E. Roelofson, 74 B'way, N. Y.
Halifax				A. Case, 7 Phœnix B'l'g, Boston.
Her'it'ge Ranch	30.000	300.000	El Dorado, Cal.	
Hope	80.000	2,000.000	G'ld Dirt Lode, Gilp. co., Col.	J. P. Davies, 81 John, N. Y.
Holman	150,000	300.000	Clear Creek co., Col.	J. O'Neill, 23 Wm, N. Y.
Humboldt	100,000	500,000	Colorado	78 B'way.
Idaho	100,000		Montana	5 Pine, N. Y.
Invincible				
Isaac's Harbor	100,000	500,000	Isaac's Harbor, Nova Scotia	W. F. Shirley, 137 B'way, N. Y.
Isle Royale				44 Ex. Pl.
Kansas Colorado	100,000	1.000.000	Colorado	J. G. Greenlies, 111 B'way, N. Y.
Kent				G. H. Wyman, 19 Phe'x B'l'g, Bos.
Kip & Buell	100,000	200.000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Knick'rb'cker & Nevada	100,000	1.000.000		
La Crosse	100,000	$1,000,000	Nevada Dist., Colorado	H. Fales, 12 Pine, N. Y.
Liebig	200,000	1.000.000	Colorado	
Lake Major	12,000	$300.000	Nova Scotia	Fred. Franck, 113 Water, N. Y.
Mariposa Gold	100,000	10.000.000	Bear Valley, Cal.	G. W. Farlee, 34 Wall, N. Y.
Mammoth	50.000	500.000	Colorado.	J. Jarrett, 41 Liberty, N. Y.
Manhattan	100,000	1.000.000	Colorado.	W. R. Lothrop, 172 B'way, N. Y.
Massachusetts	250,000	1,200.000	Gilpin co., Col.	W. D. Briggs, 11 Phe'x B'l'g, Bos.
Merchants	30,000	600,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N. Y.
Metropolitan				
Mountain Pride	100,000	1.000.000	B'r C'k, St. Bse., Idaho	29 Pine, N. Y.
Montague	50.000	500.000	near Halifax, Nova Scotia	C. B. Cowling, 39 Kilby, Boston.
Mount Alpine			Griffith Dist., Clear C'k. Col.	J. B. Randol, N. Y.
Mount Vernon	500.000	5,000.000	Mt. V. & Mam'th Dist., Nev.	25 Park Row, N. Y.
Mount Vista	50,000	500.000		J. Chapman, 23 Nassau, N. Y.
Montana	100.000	400.000	Nevada, Ills., Greg'y, Col.	A. L. Guerber, 54 Wm, N. Y.
Montezuma	100,000	500.000	Colorado	F. B. Webster, Boston.
Montrose	100.000	1.000.000	Clear Creek co., Col.	C. A. W. Sibley, 80 B'way, N. Y.
Morning Star		5.000.000	Owyhee co., Idaho	137 B'way, N. Y.
Mexican Pacific	100.000	10.000.000	Mexico	J. Mackie, 88 Wall, N. Y.
Melones & Stan			Calaveras co	606 Mont, San Francisco.
National	300,000	3,000.000	on So. Boulder C'k, Col.	31 School, Boston.
Nevada Star				25 Pine, N. Y.
New England	50,000	150.000	Black Hawk, Col.	J. Weatherbee, Jr., Boston.
New Mexico			near SantaFe	
New Gregory				W. A. Kent, 144 State, Boston.
New York City	50.000	5.000.000	G'd Canon D't, Land. co. Nev.	10 Pine, N. Y.
New York Dist.	50,000	500.000	Austin, N. Y. Dist., Nevada	71 B'way, N. Y.
New York of Col	100.000	1,000,000	Colorado,	F. E. Roelfson, 74 B'way, N. Y.
N. Y. & Nevada	100.000	1,000.000	Nevada.	J. J. Osborn, 30 Pine, N. Y.
N. Y. G Min'g	100.000	1.000.000	Colorado	F. E. Roelofson, 78 & 80 B'way.
N. Y. & Elder'do			Nevada	106 B'way, N. Y.
N. Y. & Idaho			Idaho	180 Chatham, N. Y.
N. Y. & Santa Fe			Nevada	New York.
N. Y. & O. G. & S. M.		1.000,000	Owyhee co., Idaho	137 Broadway, N. Y.
N. Y. & O. F. G. & S. M.	10.000	1.000,000	Owyhee co., Idaho	1 Pine, N. Y.
N. Y. & Reese R			Nevada	New York.
N. Y. & Washoe			Nevada	New York.
North Clear C'k	100.000	1.000,000	Gilpin co., Col.	J. Francis, 80 B'way, N. Y.
Nova Scotia				Chas. Barrett, 13 Doane, Boston.
N. Y. & Nova Sc	100,000	1.000,000	Tangier, Nova Scotia	Jos. E. Gay, 3 Hanover, N. Y.
National S Min'g		1,500,000	Owyhee co, Idaho	115 B'way, N. Y.
Occidental	5.000	500.000	Nevada & Ills. C. Dist., Col.	100 B'way, N. Y.
Oldham				Chas. Barrett, 13 Doane, Boston.
Ophir	62.500	625.000	on Comstock Lode, Nevada.	Moses A. Hopnock, 47 Ex. Pl.
Pacific	40.000	4.000.000		24 Pine, N. Y.
People's	100.000	5.000.000	Alpine & Sierra cos.	23 Nassau.
Peck				E. R. Sawyer, 144 State, Boston.
Perigo	60.000	3.000.000	Ind. Dist., Gilpin co., Col.	J. W. Stratton, 90 B'way, N. Y.
Pine Mountain	30.000	3.000.000	Pine Mountain Dist., Nev.	F. K. McCully, 157 B'way, N. Y.
Pioneer & Inskip			Buena Vista Dist., Nevada.	15 Nassau, N. Y.
Phila. & Color'do	20.000	1,000.000	Central City, Col.	E. W. Clark & Co., Phila.
Phelps & Gilm're	200,000	1.000,000	Colorado	W. H. Stenelervant, 23 Nassau.
Pleasant Valley	125.000	1.250.000	Colorado	J. S. Lyon, 69 Wall, N. Y.
Pontiac	50.000	1.000.000	Ill. Cen. M. Dist., Col.	R. H. Rickard, 19 Nassau.
Prescott	100,000	1.000.000	Central Arizona	69 B'way, N. Y.
Prince Albert				W. H. Chessman, 9 Central, B'stn.
Quaker City			Ind't D't. G'd D't City, Col.	103 South Third, Phila.
Quartz Hill	40.000	100.000	Nevada Dist., Col.	J. A. Tyler, 29 Wall, N. Y.
Ranche C'k	10.200	1,200.000	Pine Wood Dist., Nevada	18 Broad, N.Y.
Realito		1.600.000	G'd Hill D., Storey co., Nev.	117 B'way, N. Y.
Reese River Pr'l G. & S.	100.000	1,000,000	AmadorDist., Landor Co., Nev	Elijah Alliger, 67 Wall, N. Y.
Renfrew				W. Stockbridge, 74 F'klin, Bos'n.
Republic	15.000	1.500.000	Amador D., Lander co., Nev.	67 Exchange Pl., N. Y.
Rocky Mountain	50.000	500.000	Grey & Empire Dists., Col.	E. L. Bolles, 49 Ex. Pl., N. Y.
Reciprocity	100.000	1.000.000	Canada East	B. B. Grant, Jr., 71 B'way, N. Y
Scorpion			Virginia City, Nevada	617 Clay, San Francisco.
Sherbrooke	100,000	1,000,000	Sherbrooke, Canada East	F. Schumacker, Cliff, N. Y.
Silas Wright	60.000	600.000	Amador D., Lander co., Nev.	18 Wall, N. Y.
Silver State	100,000	500.000	Humb't Starr, Pr. R. D Humb't co., Nevada	R. S. Miller, 49 William, N. Y.
Silver Wave	300.000	3,000.000	Reese riv., Lander co., Nev.	Emmet Blair, 243 B'way, N. Y.
Smith & P'rmlee	125.000	2,500.000	Colorado	G. A. Luthrop, 4 Broad, N. Y.
Spanish		3.000.000	La Plata, Churchill co., Nev.	228 South Third, Phila.
So. Clear C'k			Colorado	Canastota, N. Y.
Starlight Ledge	50.000	500.000	P'ville, El Dorado co.	
Star of Color	200.000	2.000,000	Colorado	J. N. Powers, 22 Pine, N. Y.
Standard	50,000	500.000	Gregory Dist., Col	T. A. Mitchell, 12 Wall, N. Y.
Steptoe	20.000	2,000,000	G'd Can., Lander co., Nev.	157 B'way, N. Y.
Sterling City		1.200.000	Colorado	New York.
Stewart	100,000	500.000	Colorado	C. Durham, 31 Exchange, Boston.
Suffolk				Carlos Cobb, 22 William, N. Y.
Southard				Wm. Wallace, 11 Doane, Boston.
Stafford				C. E. Jackson, 15 Central, Boston
Tascher	100.000	1.000,000	Colorado	F. J. Wright, 8 Wall, N. Y.
Texas	50.000	500,000	Black Hawk City, Colorado.	Wm. E. Parish, 165 B'way, N. Y.
Triunfo			San Antonio, L. Cal.	San Francisco.
Union	240.000	12.000.000	Colorado	F. A. Potts, 110 B'way.
United States	75.000	1.500.000	Colorado	J. P. Stevens, N. Y.
Victoria				W. H. Chessman, Central, B'stn.
Virginia City	250,000	250.000	Nevada.	J. R. William, 78 & 80 B'way.
Wauba Yuma	600.000	6.000.000	Arizona	35 William, N. Y.
Waddingham	24.000	600,000	Alturas co., Idaho.	Jas. K. Selleck, 104 Wall, N. Y
Waverley				J. Leighton, 97 State, Boston
Windsor Gold M	10,000	100,000	Colorado	25 William, N. Y
Wilson & Cass			Colorado	New York.

NEVADA STOCKS.

San Francisco Quotations.

LATEST BY MAIL.

NAME.	FRIDAY, March 16.		Sales for week Ending March 23.	
	Open'g	*Clos'g*	*Shares.*	*Amount.*
Sierra Nevada	$	$	75	$ 2,933 00
Imperial	130	137½	822	111,613 00
Gould & Curry			5	5,260 00
Chollar—Potosi	390	400	289	13,433 00
Yellow Jacket	775	800	218	153,676 00
Bullion	110	125	365	38,796 00
Crown Point	1400	1400	41	55,452 00
Belcher	315	325	181	49,122 00
Overman	60	65	199	12,712 00
Ophir	680	725	252	163,998 00
Hale & Norcross	1030	1050	45	46,861 00
Exchequer			44	397 00
Savage	1010	1050	120	120,164 00
Empire Mill	200	200	54	10,300 00
Alpha	200	200	15	4,040 00
Blue Ledge				
Lady Bryan				
Daney			128	1,706 00
California Tunnel				
Balt. American			196	1,806 00
Real del Monte				
Confidence	48	52½	482	25,784 00

LATEST BY TELEGRAPH.

SAN FRANCISCO, April 25.

Name.	Bid per foot.
Gould & Curry	875
Savage	1125
Chollar—Potosi	315
Ophir	735
Hale & Norcross	975
Crown Point	1325
Yellow Jacket	815
Belcher	335
Alpha	400
Imperial per share	150

MARKET REVIEW.

FRIDAY EVENING.

The money market, which during the early part of the week was steady and buoyant, became less so on receipt of the unfavorable news of the state of financial affairs in Europe. The price of gold has continued gradually to advance; this afternoon it reached 129¼. The latest quotation at 3:30 was 128⅞.

The loan market is easy at 4 to 5 per cent.; the supply being abundant, with little demand. In the afternoon there was a better demand—rates unchanged. First-class commercial paper at 60 days 6@6½ per cent. There is a balance of nearly ninety-five millions lying in the sub-Treasury here.

There is a demand for foreign exchange at an advanced rate Bankers bills on London at 60 days, 107¼@108. Short sight, 109 @109½. Commercial, 108@108½. On Paris at 60 days $5.26¼ @$5.24½; at short sight $5.18¾@$5.17½.

The stock market is dull, but steady. Government stocks maintain the advances made during the past week; 6's '81 c. 108¼; 5.20 c. '62, 106¼; 5.20's c. '64, 105⅝; 5.20 c. '65, 105⅞; 10.40's 95¼. The same may be said of dividend paying railway stock.

Mining and petroleum stocks generally are dull.

The imports continue large, being for the week.....$7,624,404
Corresponding week last year..... 6,115,329

Increase.....$1,509,075

The exports for the week are.....$6,255,521
Corresponding week last year..... 2,114,312

Increase.....$4 141,209

The imports from Great Britain have quadrupled during the past two years.

There is now a prospect of a speedy settlement of the new tariff rates, which probably will not be lower than those at present payable. This, with the abundant supply of money, has brought about a little more activity in some branches of the metal trade.

IRON.—Both Scotch and American Pig Iron are in better request, 1,000 tons American No. 1 sold at $42.50@$43 · 550 tons No. 2

at $42; 150 tons Scotch Pig, $43. 50. English and American refined Bar, at $94@$100 per ton, and Swedes Bar, assorted sizes, $95 @$105, gold, per ton. In Steel no change in prices, but a good deal of business doing.

COPPER.—American Ingot is dull. Sales of 25,000 lbs. Lake and Baltimore are reported at 28c.@29c.

LEAD—Is being held at 6¾c. for foreign Pig; Sheet and Pipe 11½c., and Bar 8½c. per lb.

TIN.—The sales are very light, and prices slightly lower.

QUICKSILVER—In large lots is being sold at 80c.; in small lots of 15 flasks, 80c.@85c.

COAL.—At the sale this week there was a general improvement in prices:

6,500 tons Lump.	$5 87½@$6 20		
3,000 " Steamboat	6 40	@	6 70
3,500 " Grate.	6 75	@	7 00
3,500 " Egg	6 60	@	7 25
4,500 " Stove.	7 00	@	7 25
4,000 " Chestnut	5 50	@	5 60

PETROLEUM.—There has been little doing during the past week. To-day there is more activity, at a slightly advanced rate. Crude oil, 25c; Refined, 41c.@42c. It is said that crude petroleum is to be exempt from tax, also the product of the first distillation of all bituminous substances. The exports last week show a large falling off.

STEARINE—Is higher; 80 000 lbs. sold at 17c. to 19c., and 70,000 Grease, at 11c. to 13½c.

SALT.—Two cargoes Turk's Island sold at 45c. per bushel.

London Metal Market.

COPPER ORES.
SOLD AT TABB'S HOTEL, REDRUTH, MARCH 29.

MINES.	TONS.	PRICE.
South Caradon	567	£4906 19 6
Wheal Rose	500	1821 7 6
Cliff'd Amalgat'd	430	859 10 0
North Treskerly	300	1509 15 0
Gt. Wheal Busy	283	584 14 0
Fowey Consols	250	1248 6 6
Phœnix Mines	235	£604 2 6
West Caradon	173	874 3 0
Gonamena	111	284 3 6
Craddock Moor	34	111 7 0
Wheal Polnarma	28	139 18 0

LONDON METAL MARKET.

LONDON, April 6th, 1866.

		£.	s.	d.	£.	s.	d.
COPPER	Best selected...Per ton,	94	0	0			
	Tough Cake & Tile "	91	0	0			
	Burra Burra..... "	93	0	0			
	Copper wire....per lb.		12				
	Do. Tubes...."		12¾				
	Sheathing & Bolts per ton,	96	0	0			
	Bottoms..... "	101	0	0			
	Old (Exchange.)..."	82	0	0			
IRON	Bars Welsh in London	7	10	0	a 8	0	0
	Do., to arrive	7	10	0	7	12	6
	Nail Rods	8	7	6	9	5	0
	Do. Stafford in London	8	15	0	8	17	6
	Bars....Do.	8	15	0	10	0	0
	Hoops...Do.	9	15	0	10	10	0
	Sheets, single	10	7	6	11	0	0
	Pig No. 1 in Wales	4	5	0	4	10	0
	Refined Metal, Do.	4	0	0	5	0	0
	Bars Common Do.	6	15	0	7	5	0
	Do. Merch. Tyne or Tees	7	10	0			
	Do. Railway in Wales	6	7	6	6	10	0
	Do. Swede in London	11	10	0	12	0	0
	To arrive	12	0	0			
	Pig No. 1 in Clyde	3	16	0	4	5	0
	Do. f. o. b. Tyne or Tees	2	9	6			
	Do. Nos. 3, 4, f. o. b. Do.	2	6	6	2	5	6
	Railway Chairs	5	10	0	5	15	0
	Do. Spikes	11	0	0	12	0	0
LEAD	English Pig Common	21	5	5			
	Do. ordinary soft	21	10	0			
	Do. (W. B.)	22	15	0			
	Do. Sheet	0	[illegible]	0	21	15	0
	Do. Red Lead	23	10	0	24	0	0
	Do. White	27	0	0	30	0	0
	Do. Patent Shot	23	15	0	24	0	0
STEEL	Swedish in Kegs (rolled) per ton	13	0	0	14	0	0
	Do. (hammered)	15	0	0	16	0	0
	Do. in faggots	16	0	0	16	10	0
	English Spring	19	0	0	23	0	0
	Quicksilver per bottle	8	0	0	nom.		
SPELTER	Foreign...per ton.	24	0	0			
	To arrive "	24	0	0			
ZINC	In Sheets	30	0	0			
TIN	English Blocks	91	0	0			
	Do. Bars in barrels	92	0	0			
	Do. refined	94	0	0			
	Banca	85	10	0			
	Straits	84	10	0	a 00	0	0
TIN PLATES*	I C Charcoal 1st qu. per. bx.	1	15	0			
	I X Do. 1st quality..."	2	1	0			
	I C Do. 2nd quality..."	1	13	0			
	I X Do. 2nd quality..."	1	19	0			
	I C Coke	1	8	0	a 1	9	6
	I X Do.	1	14	0	1	15	0
	Canada Plates per ton.	13	10	0			
	In London: 2½ s. less at the works.						
	Yellow Metal Sheathing per lb.		9				
	Sheets per lb.		9				
	Indian Charcoal Pigs in London	7	0	0	7	10	

* At the works, 1s. to 1s. 6d. per box less.

BOSTON PETROLEUM STOCKS.

Boston Companies.	April 20. BID.	ASKED.	April 21. BID.	ASKED.	April 23. BID.	ASKED.	April 24. BID.	ASKED.	April 25. BID.	ASKED.	April 26. BID.	ASKED.
Beebe Farm	1 00	1 50	1 00	1 50	1 00	1 50	1 00	1 50	.....	.....	.....	.....
Boston and Kentucky	50	1 00	50	1 00	.....	60	.....	60	.....	.....	.....	.....
Boston Oil Creek Land Co	.....	80	.....	70	.....	70	.....	70	.....	.....	.....	.....
Boston Petroleum Oil Co.	1 00	2 00	1 00	2 00	1 00	2 00	1 00	2 00	.....	.....	.....	.....
Botolph Oil Well Co	.....	1 00	.....	1 00	.....	1 00	.....	1 00	.....	.....	.....	.....
Crescent Petroleum Co	50	1 50	90	1 00	90	1 00	90	1 00	.....	.....	.....	.....
Everett Oil Co	10	15	10	15	10	15	10	15	.....	.....	.....	.....
" " (Pref. Stock)	1 00	1 50	1 00	1 50	1 00	1 50	1 00	1 50	.....	.....	.....	.....
Farrar	.....	7 00	.....	7 00	.....	7 00	.....	7 00	.....	.....	.....	.....
Fuller Farm	10	15	10	15	10	15	10	15	.....	.....	.....	.....
Great Basin	.....	10	.....	10	.....	10	.....	10	.....	.....	.....	.....
Indian Spring	10	20	10	20	10	20	10	20	.....	.....	.....	.....
Mass. and Oil Creek	.....	15	.....	15	.....	15	10	15	.....	.....	.....	.....
New England	10	15	10	15	10	15	10	15	.....	.....	.....	.....
New York and Boston	50	1 50	50	1 50	50	1 50	50	1 50	.....	.....	.....	.....
Pepper Petroleum	5 25	5 50	5 35	6 00	5 00	5 25	5 00	5 25	.....	.....	.....	.....
Pittsburgh and Boston	5	6	5	6	5	6	5	6	.....	.....	.....	.....
Tremont	.....	4 00	.....	4 00	.....	4 00	.....	4 00	.....	.....	.....	.....
Winthrop	6	10	6	10	6	10	6	10	.....	.....	.....	.....
Suffolk and Oil Creek	10	20	10	20	10	20	10	20	.....	.....	.....	.....
Independ. of U. S. & C. W.	38 00	42 00	38 00	42 00	36 00	40 00	.....	40 00	.....	.....	.....	.....
New York Companies.												
Bennehoff Run	11 20	11 50	11 15	11 40	11 20	11 40	11 70	11 80	.....	.....	.....	.....
Bergen Oil and Coal	7	.....	7	20	7	20	.....	.....	.....	.....	.....	.....
Bradley	.....	.....	13	15	11	18	12	15	.....	.....	.....	.....
Buchanan Farm	36	40	36	39	36	39	36	38	.....	.....	.....	.....
Central	2 10	2 25	2 00	2 15	1 95	2 05	1 95	2 05	.....	.....	.....	.....
Cherry Run	.....	25	.....	20	.....	20	.....	.....	.....	.....	.....	.....
Consolidated	.....	.....	.....	1 75	.....	1 75	.....	1 80	.....	.....	.....	.....
Empire City	32	38	36	40	36	40	35	40	.....	.....	.....	.....
Empire and Pit Hole	10	25	12	20	12	20	10	30	.....	.....	.....	.....
Excelsior	.....	.....	52	65	46	60	55	70	.....	.....	.....	.....
First National	13	14	11	13	10	12	8	10	.....	.....	.....	.....
Germania	10	10	5	10	5	10	5	8	.....	.....	.....	.....
Heydrick	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Highgate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knickerbocker	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manhattan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McKinley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
N.Y., Phila. & Baltimore	.....	90	.....	50	.....	50	.....	.....	.....	.....	.....	.....
Northern Light	.....	2 25	.....	2 50	.....	2 50	.....	2 50	.....	.....	.....	.....
Oceanic	.....	25	15	20	15	20	.....	.....	.....	.....	.....	.....
Oil Creek	80	90	85	95	87	95	85	95	.....	.....	.....	.....
Palmer Petroleum	.....	2 80	.....	2 00	.....	2 00	.....	55	.....	.....	.....	.....
President	.....	35	.....	35	.....	35	40	.....	.....	.....	.....	.....
Pit Hole Creek	2 80	3 00	2 80	3 00	2 80	3 00	2 75	3 00	.....	.....	.....	.....
Rynd Farm	17	.....	21	30	20	25	20	.....	.....	.....	.....	.....
Tack	.....	20	4	10	4	10	.....	15	.....	.....	.....	.....
Union	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
United States	9 30	9 50	9 45	9 60	10 50	10 60	10 30	10 60	.....	.....	.....	.....
Webster	30	50	30	50	30	50	30	45	.....	.....	.....	.....
Shade River	40	55	.....	.....	5 70	.....	25	35	.....	.....	.....	.....
Hard Pan	2 45	2 55	2 45	2 55	2 45	2 50	2 40	2 50	.....	.....	.....	.....
Petroleum Consolidation	.....	18	.....	18	5 60	6 00	5 20	5 50	.....	.....	.....	.....
Quarts Hill Gold	5 40	.....	5 85	6 00	8 00	8 40	8 80	9 00	.....	.....	.....	.....

Daily Quotations of Mining and Oil Stocks.

OIL STOCKS.	April 21. BID.	ASKED.	April 23. BID.	ASKED.	April 24. BID.	ASKED.	April 25. BID.	ASKED.	April 26. BID.	ASKED.	April 27. Bid	ASKED.
Bennehoff Run	11 15	11 25	11 20	11 25	11 70	12 90	11 50	11 80	11 50	11 70	10 65	10 85
Bennehoff Mutual	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buchanan Farm	36	38	36	48	36	38	36	37	37	40	66	40
Bliven	.....	.....	.....	2 50	.....	2 50	.....	3 00	.....	2 10	.....	2 50
Bradley	11	18	12	15	13	16	13	18	10	15	10	14
Brevoort	.....	.....	1 00	2 50	.....	2 50	1 50	2 00	.....	2 00	1 00	1 95
Central	2 00	2 05	1 90	2 08	1 90	2 00	1 95	2 05	1 95	2 05	2 00	2 00
Empire City Pet'm Co	38	40	35	40	.....	50	36	42	36	40	36	40
Empire and Pit Hole	5	.....	10	30	6	15	.....	.....	10	40	5	25
Excelsior	45	64	46	70	55	70	55	90	55	75	70	1 00
First National	6	9	8	10	12	17	13	15	11	14	13	18
Hamilton McClintock	1 00	1 50	1 00	1 50	1 00	1 25	1 15	.....	1 00	2 00	.....	2 00
Ivanhoe	.....	2 50	2 50	2 75	2 60	2 75	2 50	2 30	2 60	2 90	2 50	2 85
Mt. Vernon	.....	.....	.....	50	.....	45	.....	.....	.....	35	.....	40
N. Y., Phila. & Baltimore	.....	.....	.....	.....	.....	35	20	30	20	30	.....	30
N. Y. & Alleghany	3 25	3 50	3 30	3 50	3 30	3 50	3 30	3 50	3 35	3 50	3 30	3 50
Northern Light	85	86	.....	2 50	.....	2 00	.....	3 00	.....	2 50	2 20	2 25
Oil Creek of N. Y.	.....	.....	87	90	85	90	80	90	85	88	85	90
Palmer Petroleum	2 75	2 90	.....	55	.....	1 00	.....	75	.....	.....	.....	1 00
Pit Hole Creek	.....	.....	2 75	2 85	2 60	2 85	2 80	3 00	2 80	2 95	2 80	2 90
Pit Hole Farms	.....	20	2 10	2 25	.....	.....	2 15	2 80	2 20	.....	2 15	.....
Rynd Farms	.....	35	40	.....	20	21	22	25	23	25	20	75
Shade River	.....	.....	25	35	33	45	45	50	51	54	45	55
Sherman Oil Co	.....	7 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Union	9 40	9 70	.....	.....	.....	.....	.....	.....	.....	.....	1 00	6 00
United States	30	40	10 45	10 60	10 30	10 50	9 50	9 80	9 00	9 15	8 70	8 80
Webster	.....	3 00	30	40	25	60	31	45	31	45	30	50
FREE LIST.												
Allen Wright	10	55	.....	75	.....	1 00	.....	50	.....	40	.....	.....
Bergen Oil & Coal	.....	20	.....	.....	.....	40	.....	30	.....	.....	3	30
Bennehoff & Pit Hole	.....	1 00	.....	.....	.....	.....	.....	1 00	.....	.....	.....	.....
Brooklyn	.....	50	.....	75	.....	75	.....	75	.....	95	20	90
Cherry Run Petroleum Co	5	20	.....	.....	.....	.....	5	75	.....	20	.....	25
Clinton Oil	1 00	1 35	.....	1 40	.....	1 50	1 00	1 40	75	1 25	.....	1 20
Consolidated (New York)	.....	1 80	.....	1 80	.....	.....	.....	.....	.....	1 50	.....	1 50
Eclectic Oil	70	72	.....	.....	80	1 00	75	85	85	90	85	90
Equitable	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enniskillen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fee Simple	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Forest Co. Petroleum Co	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Germania	6	8	5	8	7	9	.....	10	.....	9	5	7
Gt Western Consolidated	25	40	25	.....	.....	.....	.....	.....	20	.....	25	.....
Guild Farm	15	30	10	.....	.....	.....	15	.....	.....	.....	.....	.....
Heydrick	.....	.....	.....	40	.....	40	15	.....	.....	30	.....	.....
Heydrick Bros	.....	40	.....	.....	.....	.....	.....	45	.....	.....	10	25
High Gate	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	.....
Homowack	6	10	5	20	5	25	15	20	8	.....	12	.....
Inexhaustible	.....	.....	.....	10	.....	.....	.....	10	.....	10	.....	.....
Liberty	.....	20	.....	7	.....	10	.....	15	.....	.....	2	20
Lilly Run	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manhattan	.....	.....	.....	.....	.....	25	.....	.....	.....	15	.....	.....
National	.....	.....	.....	.....	.....	4 00	.....	.....	.....	4 00	.....	.....
New York & Newark	8	20	10	20	10	25	.....	25	10	25	5	25
New York & Philadelphia	.....	50	.....	45	.....	.....	.....	50	10	40	.....	.....
Second National	.....	1 00	.....	1 00	.....	.....	.....	1 00	50	70	.....	75
Oceanic	.....	20	.....	.....	.....	25	10	25	.....	.....	11	15
Pepper Well	.....	6 00	.....	5 60	.....	5 50	.....	5 50	4 10	5 10	.....	5 40
Pit Hole Petroleum No. 2	40	75	.....	.....	.....	.....	.....	50	.....	40	.....	50
President	.....	.....	40	.....	40	.....	.....	.....	.....	.....	.....	1 00
Pet. Consolidation	.....	.....	.....	.....	.....	.....	.....	45	10	40	15	22
Sherman Oil	.....	5	.....	25	.....	.....	.....	1 00	.....	.....	.....	25
Southard	.....	70	.....	55	.....	60	.....	20	.....	70	.....	75
Sherman & Barnsdale	.....	3 00	.....	.....	.....	20	.....	.....	.....	20	.....	10
Tack Petroleum Co., N.Y.	.....	10	.....	15	.....	15	5	10	.....	10	5	10
United Pet oleum Farms	15	25	10	20	15	23	10	20	.....	.....	15	20
Venango & Pit Hole	.....	3 20	.....	3 00	.....	.....	.....	.....	.....	3 00	.....	3 00
West Va. Oil & Coal Co	5	8	7	10	.....	8	5	.....	6	7	5	6
MINING STOCKS.												
Altona	1 60	2 25	1 65	2 00	1 75	2 25	1 75	2 10	1 75	2 00	1 75	2 00
American Flag	3 00	3 10	.....	3 25	.....	3 20	.....	3 10	.....	3 25	.....	3 25
Atlantic & Pacific	.....	3 50	3 25	3 75	3 25	3 70	3 25	3 50	2 50	3 50	2 50	2 75
Bates & Baxter Gold	2 25	2 50	2 10	2 50	2 10	2 75	2 50	2 95	2 35	2 60	2 15	2 15
Benton Gold	1 60	1 75	1 60	1 75	1 70	1 75	1 60	1 70	1 55	1 75	1 65	1 70
Burroughs Gold	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Black Hawk	.....	.....	.....	.....	25 00	.....	28 00	5 00	25 00	.....	25 00	.....
Briggs Gold	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Robtail Gold	2 00	3 25	.....	3 50	2 25	3 25	2 00	3 75	2 05	3 75	2 25	3 25
Consolidated Gregory	15 50	15 75	16 05	17 00	16 10	16 25	16 90	17 60	16 25	16 75	15 75	16 00
Corydon	.....	.....	1 25	2 00	1 25	2 40	.....	1 75	1 10	1 20	1 00	2 25
Downieville Gold	.....	36	36	38	35	37	35	36	36	38	40	42
Elmore Gold	1 50	1 50	3 00	.....	1 50	3 00	.....	.....	1 75	3 00	2 05	.....
Eagle Gold	.....	2 50	.....	2 50	.....	.....	.....	2 50	.....	.....	.....	2 50
Gold Hill	1 70	1 75	1 80	2 15	.....	.....	.....	.....	.....	.....	.....	.....
Gunnell Gold	95	1 00	99	1 01	1 00	1 05	1 00	1 03	1 00	1 05	1 00	1 03
Gunnell Central	.....	5 10	4 25	5 25	.....	5 00	.....	5 25	.....	5 00	4 00	5 00
Holman	30	35	31	35	35	37	38	45	37	40	35	37
Hope Gold	.....	4 00	3 00	4 00	3 00	5 00	3 00	4 00	3 00	4 00	2 00	4 00
Kipp & Buell Gold	1 85	1 95	1 80	2 00	1 90	2 00	1 95	2 00	1 90	2 20	1 95	2 10
La Crosse Gold	.....	.....	.....	.....	.....	1 50	.....	.....	.....	.....	.....	1 50
Liberty Gold	34	38	33	36	30	35	37	42	37	45	40	60
Liebig Gold	.....	.....	.....	.....	.....	.....	.....	1 05	90	1 00	75	1 00
Manhattan Gold	.....	2 00	.....	1 10	.....	.....	.....	.....	.....	2 50	.....	.....
Montano	.....	1 50	1 10	1 50	1 10	1 50	1 00	1 50	.....	1 50	.....	1 05
New York	33	45	30	45	36	40	35	40	30	45	30	83
Perigo Gold	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Quartz Hill	5 70	5 80	5 50	5 70	5 15	5 20	5 20	5 25	4 50	4 75	4 30	4 55
Smith & Parmelee Gold	8 00	8 40	8 45	8 70	8 80	8 95	8 85	9 00	8 90	8 95	8 60	8 80
Silver Eagle	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 00	.....	.....
Texas Gold	.....	2 00	.....	2 00	58	75	.....	1 00	95	1 00	1 10	1 20
Union Gold	55	57	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waddingham Gold	.....	14 00	.....	13 00	.....	14 00	.....	14 00	.....	14 00	.....	15 00
Caledonia Copper	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Canada Copper	.....	.....	.....	.....	.....	.....	.....	60	.....	75	.....	.....
Annita Copper	.....	50	.....	.....	.....	50	.....	2 00	.....	2 00	.....	.....
Evergreen Bluff Copper	.....	2 00	.....	2 00	.....	.....	.....	.....	.....	.....	.....	.....
Excelsior Copper	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hilton Copper	.....	.....	.....	.....	.....	.....	.....	1 50	.....	.....	.....	1 50
Mauhan Lead	.....	.....	.....	1 50	.....	.....	.....	.....	2 50	3 00	2 50	3 00
Knowlton Copper	2 50	.....	2 00	.....	.....	.....	.....	.....	2 50	.....	2 50	.....
Mendota Copper	.....	5 00	.....	4 75	.....	4 50	.....	4 25	.....	4 25	.....	4 50
Minnesota Copper	13 50	.....	.....	14 00	.....	13 00	.....	13 00	.....	.....	.....	.....
Sheldon & Columbian Cop	.....	20 00	.....	.....	.....	20 00	.....	20 00	.....	20 00	.....	20 00
Princeton Copper	.....	.....	.....	1 50	.....	1 50	.....	1 50	10	1 50	10	1 50
Phœnix Lead & Mining Co	2 10	2 50	2 10	2 50	2 10	2 50	.....	2 25	.....	2 50	.....	2 50
Wallkill Lead	.....	1 25	.....	1 10	.....	1 10	60	1 05	.....	1 05	.....	1 05
Columbian Coal	.....	.....	3 50	4 00	3 50	4 00	3 85	3 95	.....	.....	50	1 00
Copake Iron	50	75	59	70	50	70	50	1 25	50	1 00	.....	.....
Vermont Marble	.....	.....	8 00	9 00	8 00	9 00	.....	.....	.....	.....	.....	.....
Rocky Mountain Gold	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....
Clute Lead	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deubo Lead	.....	.....	.....	.....	.....	.....	9	.....	8	25	.....	.....
Isle Royal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foster Iron	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
British American Coal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waverly Co	.....	5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake Superior	.....	.....	.....	.....	.....	.....	.....	4 20	.....	4 00	.....	.....
Ogima Copper	.....	.....	.....	.....	.....	.....	3 50	5 00	3 50	4 50	10	1 50
Rockland	.....	.....	.....	.....	.....	.....	1 50	.....	1 75	.....	.....	.....
Schuylkill Col	.....	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....	.....

COPPER.

COMPANY.	SHARES.	CAPITAL.	SITUATION OF PROPERTY	SEC'Y., AND PLACE OF BUSINESS.
Adventure,	20,000		Parts of Sections 35, 36, T. 51, N Range 38 W,	W. H. Smith, 51 Ex. Pl, N. Y.
Etna,	20,000		1226 A in Secs. 6, 7, 18, T. 58, N R 28, W Keweenaw co. Mich.	B. A. Hoopes, 324 Walnut St., Phil.
Alb'ny & Bost'n,	20,000		Secs 7, 8, 9, 10, 11, T. 55, R. 33	Fred. Beck, 43 City Ex., Boston.
Anita,	20,000		Del Norte co., California,	8 Wall St., N. Y.
Algomah,	20,000		W½ S, 30, T. 51, R. 37,	L. W. Clark, Boston.
Allouez,	20,000		Town 57, R. 32, Sec. 31,	Horatio Bigelow, Boston.
Amy gdl'yd'l.,	20,000		E½ Secs. 16, 21, T. 58, R. 20, NW¼ Sec. 5, T. 57, R. 31, 160 A,	F. H. Womrath, 324 Walnut St., Philadelphia.
Arcadian,	20,000		NW¼ Sec. 20, T. 57, R. 33, 160 A,	C. P. Dixon, 48 Pine St. N. Y.
Astor,	20,000		NW¼ Sec. 5, T. 57, R. 31 160 A,	A. W. Boardman, 35 Court St., Boston.
Atlas,	20,000		NE¼ of E½ & NW¼ of NW¼ Sec. 31, T. 57, R. 31,	L. W. Clark, Boston.
Aztec,	20,000		W½ Sec. 31, T. 51, N. of R. 37,	L. W. Clark, Boston.
Bay State,	20,000		SW¼ Sec. 29, T. 58, R. 31,	L. W. Clark, Boston.
Beaver,	20,000		NE¼ Sec. 32, T. 58, R. 31,	A. W. Boardman, Boston.
Bohemian,	20,000		E½ Sec. 31, NW¼ Sec. 32, T. 51, R. 37, W,	R. H. Rickard, 21 Nassau St., N.Y.
Boston,	20,000			H. W. Warren, 63 City Ex., B'st'n.
Canada,	100,000		Brome co., Canada East,	H. P. Mount, 3 Hanover St., N. Y.
Carp Lake, M.,	20,000		T. 51, N. R. 43, W. S½ of N½ of N. Sec. 14, and E½ Sec. 23, and NE¼ Sec. 23, 440 A.	W. H. Abel, 70 Wall St., N. Y.
Cascade, M.	20,000		SW¼ Sec. 9, T. 49, N. R. 39, W, in Ontonagon co., Mich.,	G. F. Riley, 35 Wall St., N. Y.
Copper Creek,	1,000	$100,000	Missouri,	H. M. Thompson, Missouri, Mo.
Copper Falls,	20,000		Sec. 14, T. 58, N. R. 31, W, Keewenah Point,	97 State, Boston.
Copper Harbor,	20,000		S½ Sec. 10, T. 58, R. 28, 320 A. Keewenah co.,	Fred. Beck, 43 City Ex., Boston.
Copper Creek,	20,000	500,000	Douglas co., Wisconsin,	T. B. Lawson, 73 Broadway, N. Y.
Central,	20,000	500,000	E½ Sec. 23, T. 58, N. R. 31, W,	J. Stanton Jr., 25 Nassau, N. Y.
Cornwall,			Strafford, Orange co., Vt.,	D. H. Whitney, 17 State St., B'n.
Continental,	200,000	500,000	Martinsburg, New York,	J. Sickles, 50 Ex. Pl., N. Y.
Corinth,	20,000	500,000	Corinth, Orange co., Vermont,	W. A. Cleveland, 191 B'way, N.Y.
Copper Hill,			Wisconsin,	Boston.
Dacotah,	20,000		Sec. 35, T. 55, R. 34, Portage Lake,	J. M. Cooper, Milk St., Boston.
Delaware,	20,000	500,000		S. M. May, 326 Walnut St., B'st'n.
Derby,			Ontonagon co., Mich.,	P. C. Blancan, 35 Wall St., N. Y.
Dorchester,	20,000		800 A.,	31 and 32 City Ex., Boston.
Douglas,	20,000		E¼ Sec. 30, T. 55, R. 3,	S. J. Edwards, William St., N. Y.
Dudley,				H. Bigelow 43, City Ex., Boston.
Eagle River,	20,000		T. 58, R. 31, Secs. 28, 29, 33, 34,	A. Lamson, 70 State St., Boston.
Ely,	100,000	500,000	325 A., Richmond, Canada East,	Ernest Sacchi, 82 B'way, N. Y.
Empire,	20,000		1798 A., Secs. 1, 2, 11, 12, T. 58, N. R. 28, W. K'w'n co., Min.,	J. S. McMullin, 423 Walnut, Phil.
Eureka,	20,000		W½ Sec. 2, T. 49, N. R. 41, W. Ontonagon co.,	H. Shirley, 137 B'way, N. Y.
Evergreen Bluff,	20,000		NE¼ Sec. 6, T. 50, R. 33,	F. W. Capen, 44 Ex. Pl., N. Y.
Flint Steel R.,	20,000		Sec. 11, 12, T. 50, N. R. 39, W,	F. K. McCully, 157 B'way, N.Y.
Forest City,	20,000		320 A. NE¼ Sec. 36, and SE¼ Sec. 25, T. 51, R. 43,	J. F. Paul, 19 Phœnix Building, Boston.
Franklin,	20,000		SW¼ Sec. 24, T. 55, N. R. 31 W.,	C. Emery, 26 Kilby St., Boston.
Franconia,	60,000	300,000	New Hampshire,	J. Hann, 162 Fulton St., N. Y.
French Creek,	100,000		Chester co., Pennsylvania,	R. Roberts, 21 Nassau St., N. Y.
Garden City,	20,000		SW¼ Sec. 60, N. W. Sec. 29, T. 58, N. R. 31 W,	R. H. Howe, Chicago.
Girard,	20,000		600 A. Sec. 15, T. 58, N. R. 28, W. Keweenaw co., Mich.,	B. A. Hoopes, 324 Walnut, Phil.
Gr'd Portage,	20,000		SW¼ Sec. 36, R. 34, W,	A. S. Kellogg, 22 Pine St., N. Y.
Great Western,	20,000		SE¼ Sec. 30, & SW¼ Sec. 29, T. 21, K. 320 A., Ontonagon	J. M. Cooper, 24 Citty Ex., B'st'n.
Hamilton,	20,000		SE¼ Sec. 35, S½ Sec. 36, T. 50, R. 41, SW¼ Sec. 21, R. 20, 14¼ A.,	J. B. Townsend, 44 Exchange, N. Y.
Hancock,	20,000		SW¼ Sec. 26, Tract of Sec. 25, T. 5, R. 34, W.,	Fred. Beck, 43 City Ex., Boston. do. do. do. do.
Hanover,	20,000			
Hartford,	20,000	500,000	320 A. E½ & SE¼ Sec. 32, SW¼ & W ½ Sec. 33, T. 50, R. 40, W,	T. M. Tyng, 61 Cedar St., Boston.
Henwood,			Michigan,	
Hope,	20,000	50,000	240 acres in T 57, R 32, Kw co.	21 Nassau St., New York.
Humboldt,	20,000		Sec. 21, T. 58, R, 31, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Hudson,	20,000		Ontonagon co.,	P. C. Blancan, 35 Wall St., N. Y.
Huron,	20,000		Sec. 2, T. 54, R. 34, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Isle Royale,	20,000		NW¼ Sec. 1, T. 54, R. 34, W,	F. W. Chapen, 33 Ex. Pl., Boston.
Keweenaw,	20,000	500,000	Michigan,	F. W. Chapen, 44 Ex. Pl., Boston.
Knowlton,	20,000		SE¼ Sec. 1, W¾ of SW¼ Sec. 1, and other lands,	Fayette Brown, Cleveland, Ohio.
Lafayette,	20,000		Secs. 25, 30, 36, T, T. 51, N. R. 43, and 44, W, Ontonagon,	P. C. Blancan, 35 Wall St., N. Y.
Lyster,	200,000	$400,000	Township Nelson, Canada East,	H. W. Nelson, 24 City Ex., B'st'n.
Lower California	40,000	2,000,000	N. part of Lower California,	55 William St., N. Y.
Madison,	20,000		Part sec. 18, 19 entire, 30, 31.	Fred. Beck, 43 City Ex., B'st'n.
Merryweather,	20,000		Secs. 9, 19, T. 48, N. R. 4, W.,	J. T. Waters, New York.
Mandan,	20,000		680 A. Secs. 8, 17, 19, 30, T. 58, N. R. 29, W., Keweenaw co., Min.,	B. A. Hoopes, 324 Walnut, Phil.
Manhattan,	20,000		W½ Sec. 11, NW¼ Sec. 14, T. T. 58, N. R. 32, W, 360 A.	J. W. Davies, 21 Nassau St., N.Y.
Mendotta,	100,000	500,000		M. Taylor, 30 Wall St., N. Y.
Mass. M. Co.,	20,000		SW¼ Sec. 7, T. 50, N.R. 38, W,	J. M. Cooper, Pittsburgh.
Mesnard,	20,000		NE¼ Sec. 24, T. 55, R. 34,	L. Burr, 12 Phœnix B'gs, Boston.
Melones & Stan.,			Calaveras co.,	606 Mont St., San Francisco
Minnesota,	20,000		Sec. 15, T. 50, N. R. 39, W,	S. M. Pond, 12 Pine St., N. Y.
Maryland,			Maryland,	Baltimore.
Merrimac,	20,000		NW¼ Sec. 34, T. 51, R. 38, W, Ontonagon,	J. M. Mills, 284 Pearl St., N. Y.
National,	20,000		Sec. 16. T. 50, R. 39. W. 1.088 A.	J. M. Cooper, Pittsburgh.
Native,	20,000		Keweenaw Point, Michigan,	
Nashua,	50,000	100,000	320 A. N. Ontonagon,	W. F. Hardy, 27 City Ex., B'st'n.
Nebraska,	20,000		NE¼ Sec. 12, T. 50, and other lands,	S. W. J. Webb, 54 Wall St., N. Y.
Nequakett,	20,000		Sec. 26, T. 51, R. 43,	G. S. Frost, Detroit.
New York,	20,000		240 A. SE¼ Sec. 10, E½ NE½ Sec. 15.	H. W. Nelson, 24 City Ex., B'st'n.
New Burra,			Baltimore,	R. Roberts, 19 Nassau St., N. Y.
New Jersey Con.	100,000	1,000,000	New Jersey,	W. Bowes, 17 William St., N. Y.
N. Y. & Passaic,	100,000		Harrison, Bergen c.,	T. H. Belt, Jr. 25 William St., N.Y.
New Devon,				T. H. Belt, Jo, do. do.
North Western,	20,000		W½ Secs. 24, 25, 26, E½ Secs. 36, 35, T. 58, N.R. 31,	17 William st., N. Y.
Norwich,	20,000	500,000	Secs. 11, 12, T. 49, N.R. 39, W and other lands, 1,300 A.,	J. M. Cooper, Boston and Detroit.
Ogema,	20,000	500,000	NW¼ Sec. 6, T. 50, N.R. 33, W	P. C. Blancan, 35 Wall St., N. Y.
Ontonagon,	20,000		631 A. Secs. 20, 21, 28, T. 50, N. R. 39, W. Rockland,	G. E. Dellingwell, 162 B'way, N.Y
Ont'n'g'n, Mass.	20,000		Ontonagon,	G. Hart, 11 Pine Street, N. Y.
Otisville,	100,000	500,000	Otisville, Orange co., N. Y.,	William D. Williams, Michigan.
Penn. Manuf'g.,	20,000	1,000,000	4,320 A. Secs. 13, 14, 15, 24, 1½ Secs. 19, 11, 12, 23, 25, T. 58, N. R. 30, W.,	C. Windsor, 69 Wall St., N. Y.
Pewabic,	20,000		W½ Sec. 25, T. 55, N.R. 34, W.	S. M. Day, 326 Walnut St., Phil.
Pitts. & Boston,	20,000		Ts. 58, 57, N. R. 31, 32, W. 12,405 A.	C. Emery, 26 State, Boston.
Pontiac,	20,000		SE¼ Sec. 13, T. 55, N. S. 31, W.	H. A. Johnston, Pittsburgh.
Portage Lake,	20,000		Houghton co, Michigan,	C. Emery, Kilby St., Boston.
Prescott,	100,000	1,000,000	Central Arizona,	22 William St., N. Y.
Providence,	20,000	500,000	240 A. in Keweenah co., NW¼ Sec. 10, W½ NW¼ Sec. 10, T. 57, R. 32, W.	69 Broadway, N. Y.
Phila. & Boston,	20,000		640 A. Sec. 14. T. 58, N. R. 28, W, Keweenaw co., Mich.	J. W. Davis, 21 Nassau St., N. Y.
Quincy,	20,000		Sec. 26. T. 54, N. R. 34, W,	J. S. McMullin, 423 Walnut St., Boston.
Republic,	8,000	200,000		W. H. Smith, 51 Ex. Pl., N. Y.
Reliance,	20,000		Secs. 21, 22, 27, T. 58, N. R 28, W, 10,785 A.	H. Ballwin, 70 Wall St., N. Y.
Rochester,	200,000	500,000		H. K. Thomas, 11 Wall St., N. Y.
Ridge,	10,000		Sec. 35, T. 51, R. 38, W.	J. A. Ferguson, 8 Wall St., N. Y.
Rockland,	20,000		Sec. 11, T. 50, R. 39.	
Resolute,	20,000		1,120 A. Secs. 7, 18, 19, T. 58, N. R. 29, W. Keweenaw co., Mich.,	S. J. W. Barry, 12 Pine St., N.Y.
St. Mary,	20,000			F. Beck, 45 City Ex., Boston.
St. Margaret,	200,000	1,000,000	Canada,	C. B. Sutton, 62 William St., N.Y.
Sharon,	20,000		Ontonagon co., Mich.,	P. C. Blancan, 35 Wall St., N. Y.
Sheldon & Col.,	20,000		SE¼ Sec. 36, T. 55, R. 34, W,	S. J. Edwards, 22 W'm. St., N. Y.
South Side,			SE¼ Sec. 34, T. 55, R. 34, W,	H. W. Nelson, Boston.
Societe Fran'se,	10,000		T. 58, 59, N. R. 28, 30 W,	Copper Harbor.
Suffolk,	20,000			Carlos Cobb, 22 William St., N.Y.
Superior,	20,000		W¼ Sec. 14, T. 50, N.R. 39, W.	S. J. W. Barry, 12 Pine St., . Y.
Toltec Consol.,	20,000		Secs. 25, 26, R. 50, R. 36,	H. W. Nelson, Boston.
Union,	20,000	500,000		A. S. Kellogg, 22 Pine St., N. Y.
Ural,			Wisconsin,	17 William St., N. Y.
Vulcan,	20,000		1,120 A. Secs. 7, 17, 18, T. 58, N.R. 27, W. Keweenaw co.,	F. K. Womrath, 324 Walnut, Phil.
Victoria,	20,000		Secs. 20, 29, 30, 34, 34, T. 50, R. 39, and other lands,	L. W. Clarke, Boston.
W. Minnesota,	20,000		Secs. 17, 18, 19, T. 50, N. R. 39, W.	C. T. Howard, Boston.
Wickopee,	100,000	500,000	Massachusetts.	G. A. Sneden, 12 PineSt., N. Y
Vermont,	100,000	500,000	W. Fairlee, Orange co., Vt.,	
Waula Yuma,	600,000	6,000,000	Arizona,	35 William St., N. Y.

S, means section; T, township; R, range.

What's the Use of the Moon?

Mr. Geoffory, of Paris, asks, in an article in the *Monteur*, what may be the utility of the moon with regard to our planet, and whether it is only there for the purpose of raising the waters of the ocean twice a day. To this he replies that, besides the great planets that are carried along a regular path around the sun, there exists an unlimited number of bodies of different sizes, moving through space in every direction, as the almost daily discovery of a vast number of asteroids proves. In his opinion the moon was once one of those erratic bodies, and, happening one day to get within the sphere of attraction of our planet, was forced to become our satellite, instead of continuing its own course. Hence the moon is but an accident. The earth had done without it before, and might do without it again. Venus is about the size of the earth, and goes regularly around the sun, although it has no satellite. Why should the earth need one? He continues to say that our moon is of no use to us, because we might perfectly well do without oceanic and atmospheric tides, and the best eulogium he can pass on our satellite being that it is utterly useless, he goes further and declares that we owe it to the merest chance, it having been picekd up, as it were, on the way; and as such a thing might happen again, the author sees no impossibillity whatever in our getting some day another, and perhaps more moons still, added to our stock. M. Geoffroy is one of those who deny that the moon is inhabited. First, because the excessive cold there must prevent the possibility of any animal life; and second, because the moon has no atmosphere.

NEW YORK METAL MARKET.

[CORRECTED WEEKLY.]

ANTIMONY	Regulus, per lb	13 *a* 14
	Crude,	
BORAX		33 c.
BRIMSTONE		5 c.
	Crude, per ton	67 50 *a* 72 50
COPPER, Ingot,	Lake Superior, per lb. cash,	28 *a* 29
	Baltimore,	
	Pig Chili,	28 *a* 28 1-2
	Bolts	45
	Braziers,	45
	Sheathing,	45 c.
	Yellow metal,	34 c.
IRON—PIG,	No. 1 Scotch, per ton,	42 50 *a* 43 50
	No. 1 American,	41 *a* 43
	No. 2, "	40 *a* 42
	No. 1 Charcoal,	
BAR	Swedish, ordinary sizes	150 00
	Amer. & Eng. refined	115 00 *a* 120 00
	" " common	105 00 *a* 110 00
	Rails, Amer. currency	85
	" Eng. gold	56
	Horse shoe iron	140 00 *a* 147 50
	Rods 5-8 and 3-16 round and square	122 1-2 *a* 185
	Band	145 00
	Nail rods, 5-8 and 3-16,	122 1-2 *a* 185 00
	Hoops	145 00 *a* 215 00
	Sheets, Russian, per lb	31 *a* 32
	" English "	7 *a* 9 1-2
	" American "	25
	Boiler Plates, Eng,	
	" Amer.	
STEEL	Best cast in Bars, war	22
	Best sheet cast "	22
	Best cast circular saw plates 46 in.	28
	Double shear steel, war	28
	Single " " "	19
	Montague & Co. C. S. in bars	19
	Round machinery cast	15
	Best German	15
	Govt. German	12
	Eagle German	13
	(L.) Blister, war	19
	W. Jessop & Sons, blister, war	16
	Double refined	24
	Stone Axe shapes	24
	Common blister	13
	2d quality sheet	19
	3d quality sheet	16
LEAD	American Per 100 lb	
	German	8 25 *a* 8 45
	Spanish	8 25 *a* 8 45
	English	8 25 *a* 8 45
	Bar, per lb	8 50
	Pipe and sheet	11 50
TIN	Banca Govt., per lb., gold	22 *a* 22 50
	Straits	21 50
	English	22
TIN PLATES.	IC, 10–14 prime charcoal	$13 50 *a* 13 75
	IX 10-14 " "	16 75
	IC 12-12 " "	14 50
	IX 12-12 " "	17 25
	IC 14-20 " "	15 00
	IX 14-20 " "	17 75
	IC 14-20 Roofing ch. 1st	13 00
	IC 14-20 " " 2d	12 00
	IC 14-20 " Coke	9 75
	IC 10-14 Coke	11 25 *a* 11 50
SPELTER	Lehigh, per lb., currency	11 *a* 12 00
	Foreign " gold	7 *a* 7 1-4
ZINC	Mussulman & Amer.	12 1-2 *a* 13
SOLDER	No. 1,	24
	No. 2,	22
QUICKSILVER		80 *a* 85

LEAD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Amenia	100,000	$ 500,000	Duchess co., N. Y.	G. Furman, 77 Cedar, N. Y.
Bucks County	40,000	200,000	Bucks co., Pa.	R. R. Sinclair, 53 Ex. Pl., N. Y.
Canada	50,000	250,000	Canada	Alb. Case, 7 Phe'x B'l'g, Boston.
Champion				New York.
Clute	110,000	550,000	Macomb T. St. Law. co., N. Y.	Bev'l'y S. Merrill, 42 Cedar, N.Y.
Continental	200,000	500,000	Martinsburg, N. Y.	J. Sickles, 57 Ex. Pl., N. Y.
Denbo				
Eastport	100,000	1,000,000	Eastport, Me.	R. Vose, 54 William, N. Y.
Erie	40,000	4,000,000	Orange co., N. Y.	Ogden Gaul, 25 Pine, N. Y.
Hampton	100,000	500,000	Hampshire co., Mass.	C. W. Bryant, Boston.
Jefferson				65 Wall, N. Y.
King's Hill	10,000	50,000		W. L. Haskin, 180 B'way, N. Y.
Lake Superior	200,000	1,000,000	Secs. 5 & 36 T., 49 & 50 R., 28 & 29 Marquette co, Mich.	C. L. Mather, N. Y.
Lancaster	50,000	250,000	Lancaster co., Pa.	J. R. Sibley, 35 Pine, N. Y.
Macomb	110,000	550,000	Macomb T. St. Law. co., N. Y.	C. E. Scofield, 42 Cedar, N. Y.
Maine	50,000	500,000	Eastport, Me.	A. L. Butler, 54 William, N. Y.
Mineral Point	100,000	500,000	St. Lawrence co., N. Y.	H. W. Warren, 60 City Ex., B'stn.
Morgan	100,000	500,000		W. Williams, 42 Cedar, N. Y.
Mount Hope	80,000	200,000	Mt. Hope, Orange co., N. Y.	W. Williams, 24 Pine, N. Y.
New Hampshire	100,000	500,000	New Hampshire	W. A. Farrar, 71 B'way, N. Y.
N. Y. & Boston		1,000,000	Chester co., Pa.	S. M. Cockein, 22 William, N. Y.
Oswegatchie				24 Pine, N. Y.
Owens Lake	50,000	250,000		C. W. Bond, 78 Cedar, N. Y.
Placentia Bay	200,000	1,000,000	Newfoundland	J. Simpkins, 29 Wall, N. Y.
Ramsay	20,000	500,000	Township Ramsay, C. W.	C. W. Bryant, Boston.
Rochester	200,000	500,000		J. A. Ferguson, 8 Wall, N. Y.
Rossie				24 Pine, N. Y.
Rosa Clara	100,000	1,000,000		H. Lathrop, 25 Nassau, N. Y.
St. Clair	100,000	1,000,000		H. B. Hawkins, 25 Nassau, N. Y.
St. Joseph	100,000	1,000,000		W. Williams, 25 Nassau, N. Y.
Shawangunk	100,000	500,000	Mt. Hope, Orange co., N. Y.	E. P. Ackerman, 48 Pine, N. Y.
Sussex	125,000	625,000	Sparta Town, Sus'x co., N. J.	F. H. Stow, 53 Cedar, N. Y.
Walkill			Orange co., N. Y.	W. A. Scott, 170 B'way, N. Y.
Warren			Warren, Gratton co., N. H.	J. S. Christie, 100 B'way, N. Y.
White Mountain			New Hampshire	111 B'way, N. Y.

CHEMICALLY PURE PREPARATIONS USED IN THE VOLUMETRIC ASSAY.

Acid, Acetic	$0 75 lb
" Arsenious	0 05 oz
" Hydrocholoric	0 50 oz
" Nitric	0 60 lb
" Oxalic	0 20 oz
" Sulphuric	0 75 lb
Ammonia	0 60 lb
Baryta, Carbonate	0 20 oz
" Hydrate	0 40 oz
" Nitrate	0 12 oz
Barium, Chloride	0 12 oz
Copper, Sulphate	0 10 oz
Iodine	0 75 oz
Iron, Sesquichloride, Cryst	0 25 oz
Lead, Nitrate	0 10 oz
Mercury, Peroxide	0 20 oz
" Protonitrate	0 25 oz
" Chloride	0 20 oz
Potassa, Carbonate	0 25 oz
" Bichromate	0 15 oz
" Bichromate, Fused	0 20 oz
" Chromate	0 15 oz
" Hydrate	0 40 oz
" Ferrocyanide	0 25 oz
" Permanganate	0 18 oz
" Sulphate	0 10 oz
Silver, Nitrate	Gold 1 10 oz
Soda, Acetate	0 10 oz
" Carbonate	0 10 oz
" Hydrate	0 20 oz
" Phosphate	0 10 oz
Sodium, Chloride	0 10 oz

WINCHESTER'S HYPOPHOSPHITES

THE SPECIFIC REMEDY FOR

CONSUMPTION,

NERVOUS DEBILITY,

And all Disorders of the Lungs, Nervous and Blood Systems.

The success of the Hypophosphites during the past ten years, in the Cure of that greatest scourge of the race, Consumption, is "unparalleled in the annals of medicine." The new and thoroughly Scientific Remedy acts with Invariable Efficacy in all stages of tubercular diseases. It relieves the cough, checks the perspirations, subdues the chills and fever, diminishes the expectoration and promotes refreshing sleep. "All the General Symptoms Disappear with a Rapidity which is really Marvellous." Cure is the rule—Death the exception.

Their beneficial effects are equally prompt and certain in all derangements of the Nervous and Blood Systems—being unsurpassed as a Nervous Tonic, and generator of new and healthy blood; whilst for cases of General Debility, Loss of Strength, Flesh, and Appetite, Dyspepsia, Neuralgia, Paralysis, Chronic Bronchitis, Asthma, Scrofula, Chronic Diarrhœa, is the most efficacious treatment known. A Fair Trial is a Certain Cure. (Circulars free.)

Prices: In 7-oz. and 16-oz. bottles, $1 and $2 each. Six small or three large bottles for $5, by express. Sold by all respectable druggists, and at the sole general depot, wholesale and retail, by

J. WINCHESTER & CO.,
36 John Street, N. Y.

THE SPECIFIC PILL

A PROMPT AND CERTAIN REMEDY FOR

Spermatorrhea, or Seminal Weakness,

Or Involuntary Nightly or Daily Loss, however caused, or how ever severe; while they will speedily correct those Morbid Conditions arising from the original disease or from Secret Vice.

The Specific Pill is equally suited to the treatment of every species of Genital or Urinary Irritability, "Lime," or "Brick-dust," deposites in the Urine, "Milky" discharges and Weakness of the Kidneys.

Professional Opinions: "I have used your Specific Pill in many cases of Spermatorrhea with the most perfect success."—J. Milton Sanders, M. D., L. L. D.

"I have cured very severe cases with from six to ten Boxes o your Specific Pill."—B. Keith, M. D.

Price: $1 per box. Six boxes for $5, by mail. Address

J. WINCHESTER & CO.,
36 John Street, N. Y.

FEDERAL SECURITIES.

LOANS. INTEREST PAYABLE IN GOLD.	AUTHORIZING ACTS.	AMOUNT OUTSTANDING.	RATE.	PRIN. PAY.	INTEREST.	WHEN PAYABLE.		OFF. PER CENT.	ASKED PER CENT.
Registered Bonds	28 January, 1847	$9,415,250	6	1867	$564,915	Jan.	July.		120
Coupon "									
Registered Bonds	31 March, 1848	8,908,342	6	1868	534,500	Jan.	July.		114¾
Coupon "									
Registered Bonds	22 June, 1860	7,022,000	5	1871	351,100	Jan.	July		
Coupon "									
Registered Bonds	14 June, 1858	20,000,000	5	1874	1,000,000	Jan.	July.		
Coupon "			6	1881					
Bonds, March 3, 1863				1881					
Oregon War Debt			6	1881		Jan.	July.		
Registered Bonds									
Coupon "	8 Feb. & 17 July & Aug., 1861	283,715,650	6	1882		Jan.	July.		108⅛
Registered "									
Coupon "	25 February, 1862 (5-20's)	514,780,500	6	1884	30,886,830	May	Nov.	106¼	106⅜
Registered "									
Coupon "	(5-20's) new issue	100,000,000	6	1885	6,000,000	May	Nov.	105¾	105⅞
Bonds, March 3, 1865		65,175,500							
Registered "	(10-40's)	171,219,100	5	1904		Mar.	Sept.	95¼	
Coupon "									
Total April 1		1,180,236,342							

LOANS. INTEREST PAYABLE IN LAWFUL MONEY.	RATE.	AMOUNT OUTSTANDING.	PRINCIPAL PAYABLE.	INTEREST.	WHEN PAYABLE.		OFF.	ASKED.
AUTHORIZING ACTS.								
Bonds, Cent'l P. R. R. Co., July 2, 1864	6	$2,362,000 00	1895	$1,898,000 00	Jan.	July.		
Bonds, Union P. R. R. Co., July 2, 1864	6	1,633,000 00	1895					
Temporary Loan	4		10 days' notice					
Temporary Loan	5		10 days' notice					
Temporary Loan	3	18,576,939 00	10 days' notice					
Certificates of Indebtedness, March 1, 1862	6	62,557,000 00	1 yr from date		1 yr. fr. date			100
1 and 2 Years' Notes, March 3, 1863	5	8,536,900 00			1 yr. fr. date			
3 Years' Compound Interest Notes (March 3, 1863 / June 20, 1864)	6	172,012,141 00	3 yrs from date		At maturity			
3 Years' Treasury Notes (June 30, 1864 / March 3, 1865)	7.3		3 yrs from date	21,900,000 00	Aug.	Feb.	101⅛	101⅜
3 Years' Treasury Notes, March 3, 1865	7.3	817,014,000 00	3 yrs from date	21,900,000 00	June	Dec.		101⅜
3 Years' Treasury Notes, March 3, 1865	7.3		3 yrs from date	16,790,000 00	July	Jan.	101¾	101⅞
Aggregate of Debt Bearing Lawful Money Interest. April 1		1,064,455,041 00	Total Interest					

THE GOLDEN TABLET

AN INFALLIBLE

NEUTRALIZER OF ALL SUPERFICIAL POISONS, OR VIROUS.

This is one of the grandest discoveries in medical science of which the present century can boast. It instantly neutralizes, destroys and renders perfectly harmless every species of poisonous or infectious virous affecting either the external skin, or the internal mucous membrane.

THE LOCATION, CHARACTER OR NAME

of the disorder is of no importance, so that it can be reached by Washing, Gargling or Injecting. The GOLDEN TABLET is a sovereign remedy for Itch, Salt Rheum, Hives, Prickly Heat, and all other cutaneous eruptions; the poison of Oak, Ivy, Sumach; bites of Venomous Insects; Piles in all their forms; Sore Lips, Sore Eyes, Sore Nipples, Old Sores, Catarrh, Ulcerated Throat, Diptheria in its first stages; Female Weaknesses of every kind—in short, for every species of Inflammation or Virulent Exudations and Humors of the Internal Mucous Membrane, or External Skin. Communications confidential, and advice gratis.

THE GOLDEN TABLET

is, from its many beneficent uses, Woman's Best Friend, and Man's Surest Safeguard. ☞ Every adult, of both sexes, will find it indispensable to them, as will be better understood from a perusal of the Circular, which is sent free to all. Irritation almost instantly allayed in every instance.

Price: $1 per Box; six Boxes, $5, by Mail. Sold only at the General Depot of "WINCHESTER'S HYPOPHOSPHITES (for Consumption and Nervous Debility), by the Sole Agent,

J. WINCHESTER,
36 John Street, N. Y.

To whom all orders should be addressed

THOS. C. LOMBARD & CO.

(Successors to Lombard & Gore.)
BROKERS IN PETROLEUM AND COAL STOCKS,
No. 99 STATE STREET, BOSTON.

KAVANAGH & DECKER'S BILLIARD TABLES

We are now prepared to furnish New and Second-hand Tables with our New Patent Cushions, at One Day's Notice.

Illustrated Catalogues and Price Lists sent by mail.

KAVANAGH & DECKER.
235 Canal street, New York.

JULIUS G. POHLE, M.D.,
FORMERLY OF, AND SUCCESSOR TO,
Dr. JAMES R. CHILTON & CO.,
Analytical and Consulting Chemist,
No. 489 BROADWAY, - - - - - NEW YORK
(N W. COR. OF BROOME STREET.)

Analyses and Assays made of Ores of Gold, Silver, Quicksilver, Lead, Copper, Manganeese, Nickel, etc., etc.; Minerals, Alloys, Petroleum, Cummercal Articles, etc

GOMEZ SUBMARINE ELECTRIC FUSE,

For Oil Wells, Mines, Blasting, Military and Naval War purposes.

124 BLEECKER STREET, NEW YORK.

BULLION CONSOLIDATED MINING COMPANY, Colorado. Mines in Summit and Clear Creek Counties. Shares, 300,000; Stock, $300,000.

J. P. WHITNEY, Secretary, 19 Lindall Street, Boston.

INCAS SILVER MINING COMPANY.—Mines in Summit and Gilpin Counties, Colorado. Shares, 300,000; Capital, $300,000.

J. P. WHITNEY, Secretary, 19 Lindall Street, Boston.

PROSPECTUS.

THE NECESSITY FOR A THOROUGHLY RELIABLE medium of information upon MINING MATTERS has been seriously felt by those interested in the mines and mills of the United States. THE AMERICAN JOURNAL OF MINING supplies that want.

It is under the editorial control of GEORGE FRANCIS DAWSON, whose reputation is too well established to require, on our part, any comment.

There is amply sufficient capital invested in the JOURNAL OF MINING to insure its complete success.

THE JOURNAL OF MINING contains—or will contain in future issues:

Seventeen wide, solid columns of condensed, summarized Mining (including Petroleum) intelligence from all parts of the American Continent.

Four to Five Columns of Editorial articles upon topics of interest to the mining community.

Two to Four Columns of original and selected papers on Mineralogy, Geology, Metallurgy, Assaying, Mining and other Scientific Subjects.

Five to Ten Columns of judiciously selected miscellaneous articles relative to mining, the kindred sciences, etc.

Carfully Compiled Directories of Petroleum, Gold, Silver, Copper and other American Mining Companies.

Latest Quotations of Mining and Petroleum Stocks in the New York, Philadelphia, Boston and San Francisco Markets.

Nevada Mining Stocks reported by Trans-continental Telegraph.

Latest Reports of the London and New York Metal Markets; with lists of Copper sales at Swansea and Redruth, England.

A valuable Table, showing the current market values of the various classes of Federal Securities.

A convenient list of the New York current prices of chemicals and implements used in Assaying.

A reliable list of Standard Works on Mineralogy, Geology, Metallurgy, Assaying, Mining, etc.

THE JOURNAL OF MINING also publishes reports of scientific experts relative to noteworthy mines and works; and beautifully illustrated Descriptions of new processes and recent inventions in Mine and Mill machinery. It is printed in the best possible manner, upon a very superior quality of paper, and forms a compendium of trustworthy information that must prove invaluable to mine-owners, practical miners, Mineralogists, Geologists Metallurgists and others.

Each number of the JOURNAL OF MINING comprises sixteen pages of interesting and valuable reading matter; two volumes per annum, each containing Four hundred and sixteen pages, forming an excellent and almost indispensable work of reference for all interested in Mining, Milling, etc.

☞ Published every Saturday, at 12 o'clock, M.

TERMS:

SUBSCRIPTION.		ADVERTISING.	
Per annum, one copy -	$4 00	One Line [Nonp] 1 inser'n.	0 30
Six months, one copy -	2 25	One Square, 10 lines, 1 do.	2 00
Three months, one copy -	1 25	One Square, do. 4 do.	5 00
Single copy - - - -	0 10	One Square, do. one year,	40 00

Canadian Subscribers 25 cents extra for postage.

☞ Specimen Copies sent free.

Address WESTERN & COMPANY,
No. 37 Park Row, and 145 Nassau St., New York City.

IMPORTANT TO MINERS.

Every description of Analysis and Assays carefully attended to, and returns promptly made, by

WESTERN & COMPANY,
No. 37 Park Row, and 145 Nassau St., New York City.
P. O., Box 5,969.

To Inventors and Others.

The proprietors of the AMERICAN JOURNAL OF MINING have, connected with their establishment, Artists of experience and skill in

DESIGNING,
WOOD-ENGRAVING, and
LITHOGRAPHY.

Machinery, Buildings, Landscapes, etc., Designed and Engraved or Lithographed from a photograph or a plain comprehensive sketch, or from the object itself. Specimens of work ready for inspection. Terms moderate.

Inventors desirous of applying for Patents on their own account can have drawings for the Patent Office carefully and accurately executed,

AT VERY MODERATE RATES.

JOB PRINTING.

Plans, Specifications, Bill-Heads, Receipts Letter-Heads, Show-Bills, Cards, Circulars, etc., etc.,

Executed at the office of the AMERICAN JOURNAL OF MINING.

WESTERN & COMPANY,
No. 37 Park Row, and 145 Nassau St., New York City.
P. O. Box 5,969.

THE UNITY
Gold Mining Company,
OF COLORADO.

Incorporated under the Laws of the State of New York.

CAPITAL STOCK, - - - $100,000.

100,000 Shares of $1 each,

Of which $50,000 are reserved for working Capital.

President.
GEORGE E. COCK, 68 Broadway, New York.

Vice-President.
GEORGE R. WEED, Rutland, Vermont.

Treasurer.
ROBERT G. HOYT, 1 Vesey street, New York.

Secretary.
MARQUIS B. SPAULDING, 2 Astor House, Broadway, New York.

Superintendent at Mines.
GEORGE A. SAYRE, Central City, Colorado.

Counsel.
AMBROSE MONELL, 54 Wall street, New York.

Trustees.
M. B. SPAULDING, of New York.
GEORGE E. COCK, of New York.
R. G. HOYT, of New York.
AMBROSE MONELL, of New York.
GEORGE R. WEED, of Vermont.
J. Q. A. BEAN, of Boston.
WM. TRAIN MUIR, of Colorado.

Office of the Company, No. 2 Astor House, Broadway, N. Y.

The mining property of the Company is situate in the Counties of Clear Creek and Gilpin, in Colorado, and comprises Nine Thousand and Fifty Feet of Quartz Lode claims, and Two Tunnel claims. In this property are Ten Discovery claims, embracing Eleven Hundred Feet of developed Mines—the discovery claim being that point upon the Lode where gold was first found—besides several other claims upon which shafts are sunk, of varying depth. The operations at the mines will, for the present, be confined to the taking out of ore, a demand for which now exists, and will continually increase as new processes of saving gold are improved and perfected. It is not designed to purchase or equip any mill, at least for the present. The whole means and energies of the Company will be applied to the development of their mines.

The Mines of the Company in Gilpin County are situate in the well-known mining districts of Gregory, Nevada, Eureka, Illinois Central, Russell, Central, Lake Gulch, Spring Gulch, etc., etc., sixteen hundred feet being upon

QUARTZ HILL.

In this portion of the property are included

400 feet on the	- - - - -	King Solomon Lode.
400 "	- - - - -	Pacific "
200 "	- - - - -	Excelsior "
200 "	- - - - -	Augusta "
600 "	- - - - -	Ontonagon "
200 "	- - - - -	Cox "
600 "	- - - - -	Black "
100 "	- - - - -	Caledonia "
100 "	- - - - -	Mackie "
100 "	- - - - -	Lincoln "
100 "	- - - - -	Laudon "
100 "	- - - - -	Pennsylvania "
100 "	- - - - -	Barnhill "
100 "	- - - - -	Grand River "
100 "	- - - - -	Stark County " etc.

The Mines of Gilpin County are too well known to require any extended notice. The above-described property, as will be readily observed, is situate in the best mining districts, and on the most favored localities in the County.

The Company's Mines in Clear Creek County

are situate in well-known districts—Trail Run, Union, Jackson, Ohio, Griffith, etc. In Trail Run the Company own upon the Coyote, Leavenworth and Louisa—on each 100 feet; Coyote Extension, 200; Cornwall, Colorado and Berkshire—on each 300 feet. In Union District, upon the Bobtail, Northrup, Astor, Cook County, etc. In the other districts they own 200 consecutive feet on a number of valuable Lodes. The Mines of Clear Creek County are rich, but not so well developed as those of Gilpin County. In this portion of the property are

Two Tunnels in Union District.

Possessing, as they do, an immense and valuable property—enough for four or five companies—this Company intend to develop it with great vigor, and make every foot of it available. The owners of the property show their faith in this enterprise by receiving their full payment in the stock of the Company, which they agree not to sell until the whole amount of stock reserved for working capital is sold. All of the working capital will be applied to the development of the Company's mines; there are no salaries except that of Superintendent, and no office rent to be paid out of the Company's funds. Work will be commenced at once on the mines.

This enterprise recommends itself. Based upon a sound foundation, managed with skill, and all its operations directed by business ability, it must become a great success.

The stock reserved for working capital is now offered for sale at par, by order of the Board of Trustees. The purchaser of every share of the stock becomes part owner in all the valuable properties of the Company. No future assessments, and no individual liabilities.

Subscription books will be open until June 1, at the Office of the Company, where certificates of mill men who have crushed the ores, specimens and descriptive notices of the property, may be seen.

TEXAS
Gold Mining Company,
OF COLORADO.

CAPITAL STOCK, - - - $500,000

50,000 Shares of $10 Each.

Directors:

GEN. WILLIAM T. THOMPSON.....New York
WILLIAM W. LAMAN..... "
WILLIAM E. PARISH..... "
JOSEPH W. HOLMAN.....Colorado Territory
JOHN O'NEIL.....Philadelphia

President: GEN. WILLIAM T. THOMPSON.
Vice-President: JOSEPH W. HOLMAN

Secretary and Treasurer: . . WILLIAM E. PARISH.

Office, 155 Broadway, New York, Room No. 9.

The property of the Texas Gold Mining Company is located in the city of Black Hawk and its immediate vicinity, Gilpin County, Colorado, and on the well-known Bob-Tail, Fisk, and other Lodes.

325 feet on the.....Bob-Tail.
200 feet on the.....Fisk.
200 feet on the.....Chambers.
400 feet on the.....Pennsylvania.
200 feet on the.....Galena.
200 feet on the.....Hoosier.

It is useless to repeat to the public the value of the (Bob-Tail and Fisk) Lodes, as every one with the slightest knowledge of Colorado knows their great value, and the large amount of Gold they have already produced. It is well-known that, with the LYON process of treating Ores, we are safe in saying the Ores from the Bob-Tail and Fisk will yield not less than $100 per ton.

This Company is organized for the purpose of IMMEDIATELY DEVELOPING and working the Lodes, and it is proposed to PUSH the work with the UTMOST ENERGY.

The Directors have every confidence that their efforts will produce, with the facilities already at their command, SATISFACTORY AND SPEEDY RESULTS.

COLORADO HAS ALREADY PRODUCED OVER 73,000,000

OF DOLLARS IN GOLD.

Her prospects were never so brilliant as now. LYON'S process of Smelting Ores has succeeded beyond his most sanguine expectations, and the cry that we cannot save the Gold is forever silenced.

Below we give the amount of Gold taken out of the Bob-Tail Lode up to January 1st, A. D. 1865:

Genold, Buryhardt, Ingalls and Culbertson.....$250,000
Hurlburt, Holman & Dinton..... 450,000
Crandall, Hall, Patterson, Cook & Wilson..... 450,000
Black Hawk Co., or Lee, Jud & Lee..... 500,000
Smith, Chaffee & Fields..... 425,000
Sensindeffer & Buckmiller..... 300,000

WOOLWORTH & BARTON,

Overland Forwarders to all Points in Colorado, Utah, Montana and New Mexico Territories.

GENERAL OFFICES, ST. JOSEPH, Mo., and NEBRASKA CITY, NEBRASKA.

DANIELS & BROWN, Agents, Denver City.
F. E. SHORT, Travelling Agent.

H. B. MURRAY, General Eastern Agent,
291 Broadway, cor. Reade St., New York.

INCRUSTATION OF
STEAM BOILERS.

This greatest of evils in the use of steam is entirely prevented by the "Anti-Incrustable Powder" of

H. WINANS, 11 Wall Street, New York.

INVENTED AND INTRODUCED IN 1855.

now ten years in successful operation in over 6,000 boilers, without injury, and saving many times its cost in fuel and repairs.

A clean boiler generates steam more freely, and will outlast ten dirty or incrusted ones.

CARD.—Professor H. DUSSANCE, Chemist, lately from the laboratory of the French Government, will leave for Europe in the middle of May, where he will reside several months. He takes occasion to inform his numerous friends that he is ready to transact any business there in the chemical line, such as buying books and apparatus, machinery, presses, etc., selling chemical patents, etc. For further information address New Lebanon, N. Y.

NEW YORK ROCK DRILL COMPANY.

OFFICE [Till May], 152 BROADWAY.

GEN. E. M. BARNUM, PRESIDENT, . . . G. A. GARDNER, SECRETARY.

This company are prepared to fill orders for Drilling Machines for all kinds of Rock work, for outside work, and for Mining.
The Machines now offered for sale are :

No. 1 Hand machine for one man, weighing 100 lbs., with 3 drills, complete,	$200 00	No. 5, Machine for VERTICAL drilling, *without engine*, to drill holes 4 to 6 inches diameter,	
No. 2, " two " 125 " " "	250 00	with timber frame on wheels, &c.	$1,000 00
No. 3, 1 horse power Machine, weighing 150 lbs., with 8 ft. steam hose, 3 drills, complete,	450 00	No. 6, Machine (entirely of iron), drilling at any angle holes 4 to 8 inches diameter, with	
No. 4, 2 " " " 250 " " " " "	850 00	*nominal* 4 horse power engine (on truck, and moved by own engine), $2,500 to 3,000 00	

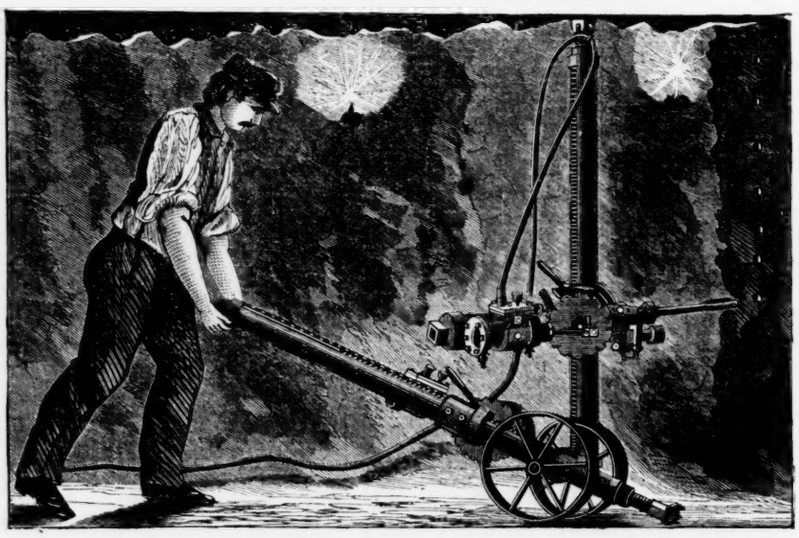
These are the only machines that have done regular work in this Country, and are the most Simple, Compact and Economical. We invite the closest scrutiny. A full sized Mining Drill can be seen daily, drilling into a block of Rockport (Mass.) Granite, the hardest Granite known, at the Machine Shop of STERLING & KERR, No. 344 and 346 West 24th street, West of 10th avenue.

GARDNER'S PATENT ROCK DRILLING MACHINE FOR MINING PURPOSES.

DRIVEN BY STEAM OR COMPRESSED AIR. G. A. GARDNER, PATENTEE, NEW YORK.

Certificate.

NEW YORK, March 25, 1866.
MR. G. A GARDNER, Sec'y N. Y. Rock Drill Co.:
SIR—After witnessing the operation of your Rock Drilling Engines on several occasions, . . . I am satisfied that they are capable of boring much faster than by HAND in any kind of rock, and will operate with about equal efficiency at any angle in a vertical or horizontal plane; that they can work in confined spaces, such as shafts and drifts of mines, railroad tunnels, etc., etc.; that several drills can be used where only one could be operated by hand labor. These Machines may be driven by compressed air. It appears to me highly probable that the time required to open mines by machinery may not be more than one-fourth of that which is now required.
The advantages resulting from such a reduction of the time can hardly be over estimated.
Very respectfully,
GEO. D. EMERSON, Mine Engineer,
Late of Lake Superior, Mich.



Certificate.

No. 95 Liberty street,
NEW YORK, March 23, 1866.
MR. G. A. GARDNER, Secretary N Y. Rock Drill Co.
DEAR SIR: Respecting the "Gardner Drill," I would say, we used it with perfect success on the Niagara Falls Canal. When we first worked it, we drilled in the solid limestone, holes of the diameter of six inches, at the rate of eighteen inches deep, in twenty minutes.
We used it for several months on the regular work, and found it more economical and effective than any other drill we have ever used. The rock is the hardest kind of blue limestone, with occasional boulders of quartz imbedded in it. You are at liberty to refer parties to me who may desire more particulars.
S. M. ALLEN,
Late President of Niagara Falls Water Power Company

☞ This cut represents a section of a mining tunnel, or *drift*, 6x4½ feet, with two Drilling Engines; one driven by *compressed air*, drilling horizontal holes, the other being moved by the Engineer to its position on a pair of wheels *temporarily* attached to its supporting column; three of these columns, with two machines on each, may be worked in a drift of this size, producing as much working effect as fully seventy-five men. A drift of this size through solid rock (Granite for example) can be thus driven ten lineal feet every 24 hours. ☜

These machines are very compact, measuring—independent of supporting column, etc.—30 inches in length by 12 inches breadth and depth, and weighing only 250 lbs. One man can move and adjust them to the work. The supporting column is held firmly in place by setting out the jack-screw, thus bracing it between the top and bottom of tunnel, or the sides of shaft, and the machines are raised and lowered by a gear working in the rack on side of column, while the attachments to the column form a *universal joint* and allow the machines to work *at any angle*. They are automatic; one engineer can attend to a gang of four or six, working on the same face. Six of them can be worked in a heading four and a half by six feet; and in a shaft six by twelve feet, eight of them can be worked at once. In a railroad, or other large tunnel, an increased number of machines can be operated, being supported and moved upon a carriage running on rails. The blow is struck by the drill being projected by the reactive force of an india rubber spring, against the rock, the drill being as free from the working machinery at the instant of striking, as an arrow shot from a bow; 300 blows per minute can be given with the utmost force the steel-drill point can bear. The cross-head to which the drill is attached is drawn back; (thus compressing the spring) by a cam rotated directly by the piston rod of an oscillating cylinder, the drill point has an automatic turning motion, and the entire machine an automatic feed, *self-regulating*, according to the varying hardness of the rock; the machine working equally well with the same adjustment when drilling on flint, or on granite cutting two inches deep per minute, or on micaslate, sandstone, or other softer rocks, cutting four and six inches per minute. They drill equally well at any angle, and with them holes can be put in the most difficult places with great facility.
Machines for open cuts have been worked for several years on railroad and canal excavations, operated by four-horse engines drilling four, six and eight-inch diameter holes, and doing the work of fifty men. Rock-Drilling can be done with these machines for one-tenth the cost of hand labor, and in one-tenth the time. We are prepared to furnish machines with *gangs of drills* for splitting granite, marble, etc.; *channelling machines* for marble, etc., when blasting is to be avoided; also machines for cutting the "BEARING IN" in Bituminous Coal Mines: we also manufacture the GARDNER PATENT DRILL POINTS, especially de-sirable for sinking oil wells; making round holes, requiring no reaming, and cutting faster than any other point.

The American Bureau of Mines,

64 BROADWAY, NEW YORK.

Mines, mineral lands and ores, examined and reported upon. Competent engineers furnished to Mining Companies.

BOARD OF TRUSTEES :

GEO. D. H. GILLESPIE.
FRANCIS TOMES, JR.
P. C. CALHOUN, President Fourth National Bank.
CHARLES AUG. DAVIS.
FRED. SCHUCHARDT, of F. Schuchardt & Sons.
E. CAYLUS, of Caylus, DeRuyter & Co.
EUGENE KELLY, of Eugene Kelly & Co.
J. F. SCHEPELER, of Schepeler & Co.
CHARLES HOLZAPFEL, of Troost, Schmidt & Co.
WILLIAM F. DRAKE, of Drake Brothers.
GEORGE E. DUNNING, Supt. of U. S. Assay Office.
R. E. MOUNT, Jr.
THEODORE GENTIL, of Gentil & Phipps.

BOARD OF EXPERTS :

F. A. P. BARNARD, S.T.D., LL.D., President of Columbia College and School of Mines. President of the Board.
JAMES P. KIMBALL, Ph. D., Mining Engineer. Vice President of the Board.
JOHN TORREY, M.D., LL.D., Assayer U. S. Assay Office, New York.
JUSTUS ADELBERG, Ph. D., Mining Engineer and Metallurgist, of Adelberg & Raymond.
ALEXANDER TRIPPEL, Ph. D., Metallurgical Engineer.
FRANCIS L. VINTON, E. M., Professor of Mining Engineering, School of Mines, Columbia College.
THOMAS EGLESTON, Jr., A.M., E.M., Professor of Mineralogy and Metallurgy, School of Mines, Columbia College.
CHARLES F. CHANDLER, Ph.D., Professor of Analytical and Applied Chemistry, School of Mines, Columbia College.
C. ELTON BUCK, Esq., Chemist and Metallurgist, of Partz & Buck.
W. P. TROWBRIDGE, A.M., Mechanical Engineer, Vice-President of the Novelty Iron Works.
HERMAN CREDNER, Ph.D., Geologist and Mining Engineer.
R. W. RAYMOND, Esq., Mining Engineer and Metallurgist, of Adelberg & Raymond. Secretary of the Board.

Consultations afforded on all mining, metallurgical and chemical questions, at the office of the Bureau (Rooms 19, 20 and 21), 64 and 66 Broadway. GEO. D. H. GILLESPIE, President.
DRAKE DEKAY, Secretary.

SCHOOL OF MINES, COLUMBIA COLLEGE,

EAST 49th STREET, NEW YORK.

FACULTY:

F. A. BARNARD, S.T.D., LL.D., President.
T. EGLESTON, Jr., E. M., Mineralogy and Metallurgy.
FRANCIS L. VINTON, E. M., Mining Engineering.
C. F. CHANDLER, Ph. D., Analytical and Applied Chemistry and Geology.
JOHN TORREY, M.D., LL.D., Botany.
CHARLES A. JOY, Ph. D., General Chemistry.
WILLIAM G. PECK, LL.D., Mining Surveying.
JOHN H. VAN AMRINGE, A.M., Mathematics.
OGDEN N. ROOD, A.M., Mechanics and Physics.

The plan of this School embraces a three years' course for the degree of ENGINEER OF MINES, or BACHELOR OF PHILOSOPHY.
For admission, candidates for a degree must pass an examination in Arithmetic, Algebra, Geometry and Plain Trigonometry. Persons not candidates for degrees are admitted without examination, and may pursue any or all of the subjects taught. The next session begins October 1, 1866. The examination for admission will be held on June 25, 26, and September 28, 29. For further information, and for catalogues, apply to
DR. C. F. CHANDLER, Dean of the Faculty.

JAY COOKE & CO.,

BANKERS,

In connection with our houses in Philadelphia and Washington, we this day open an office at No. 1 Nassau street, corner of Wall, in this City.
Mr. EDWARD DODGE, late of CLARK, DODGE & CO., New York; Mr. H. C. FAHNESTOCK of our Washington house, and Mr. PITT COOKE, of Sandusky, Ohio, will be resident partners.
We shall give particular attention to the purchase and sale of GOVERNMENT SECURITIES, and to orders for purchase and sale of STOCKS, BONDS and GOLD.

JAY COOKE & Co.

New York, March 1, 1866.

OIL LANDS FOR SALE.

Thirteen Thousand Acres of Land,

in the Canada Oil Regions, in the Townships of Enniskillen, Dawn, Zone, Moore, Brooke and Sombra, for sale or to lease, for Oil purposes, in portions to suit purchasers.
For terms and particulars apply to the proprietor.

T. D. LEDYARD, 74 Yonge Street, Toronto.

IMPORTANT TO MINING COMPANIES IN-

tending to erect Machinery in California, Nevada, Idaho, Montano, Arizona, Mexico, or any part of Pacific coast.
The fact being indisputable that many of the failures in mining operations are caused by not having machinery adapted to working the ore, it is of the first importance to start right on this point.
MR. CYRUS PALMER, one of the proprietors of the Miner's Foundry, San Francisco, has lately arrived, and will remain in New York and vicinity for some months, and is prepared to take contracts to furnish all kinds of mining machinery of the most approved style at short notice, delivered in San Francisco, or at any of the mines on the Pacific coast. He will also, if required, contract to build mills at the mines, and put them in complete running order.
Mr. Palmer has just left the Pacific coast, and is therefore, acquainted with the most approved machinery in use for reducing ore and saving the precious metals. Mr. P. has not only been actively engaged for the last ten years in manufacturing mining machinery, but has had large experience in working mines and reducing ores. On application to his address, 25 Nassau street, by letter or otherwise, he will be pleased to give any information required in regard to mining or other machinery, gratis, to any company, whether they wish to contract or not.
Mr. Palmer refers to the following companies for whom the Miners' Foundry have built mills the past year:
Knickerbocker and Nevada, 70 Cedar street; Lincoln Company, 80 Broadway; Cosmos Company, 158 Broadway; Connecticut and Nevada Company, 47 Liberty street; Cobden Company, 17 Broad street; New York Company, 80 Broadway; Tarshish Company, 80 Broadway; Washington, 80 Broadway; Mettacom Company, 144 Chambers street; Consolidated Company, 157 Broadway.
Mr. Palmer can be found at the office of R. H. Vance, Esq., 25 Nassau street, corner Cedar, from 11 to 12 o'clock, daily.

TAYLOR & SCOTT,

Mining Engineers and Surveyors,

48 PINE STREET, NEW YORK,

Will examine and report upon Copper, Lead, Coal, and other Mines; furnish Plans, and, if not at too great a distance from the city, will undertake the management of the same. Surveying of every description attended to.

REFERENCES: Prof. A. A. Hayes, Boston; Gen. A. E. Burnside, Providence, R. I.; S. L. French, Esq., Boston; N. H. S. Lead Co., New York; Black River Mining Co., Boston; H. Williams, Esq., M. E., Canada; Lionel Brough, Esq., Gov. Ins. Mines, London, Eng.; New Hampshire Silver Lead Co., New York; St. Flavien Mining Co.; R. C. Hawkins, Esq., New York and Boston; and others.